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BLUE JAY

Volume 65 Number 1

March 2007



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Blue Jay

Vol. 65 No.1

March 2007

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Front cover: Male Pine Grosbeak eating ash seeds, Coldwell Park, SK, December 2, 2006. Pine Grosbeaks enlivened 71 SK Christmas Bird Counts this year, as compared to only 18 last year. See count results on page 3.

Photograph by Nick Saunders

Back cover: Bison lying down.

W. Ray Salt (watercolour, 1980)

Inside front cover:

top: Taking off is one thing...

bottom: ...landing is another. Fledgling Great Horned Owl on the Wildwood Golf Course on April 2, 2006. Figures 4 and 5 for article on page 26.

Christian Artuso.

Inside back cover:

top: Willow Ptarmigan near Prince Albert, February 15, 2007. See note on page 52.

Harold Fisher

bottom: MARCH 2007 MYSTERY PHOTO. What species of bird is this on a slough near Last Mountain Regional Park on September 1, 2006?

ANNOUNCEMENT - VOLUNTEER NEEDED

Ornithological Worldwide Literature (OWL) is an indexed, bibliographic database of >75,000 citations going back about 25 years and covering approximately 1500 serials. In the 21st Century, published scientific information that cannot later be found is lost to the worldwide scientific community. Ornithologists can freely access this database on the Internet (www.birdlit.org/owl) to search for topics by taxa, places, authors, journals, keywords, etc. A volunteers is needed to compile the citations for *Blue Jay*, which has been expertly covered for more than 30 years by Robert Nero, one of OWL's most dedicated abstractors. The volunteer requires only access to the Internet and the journals. For more information please contact *Blue Jay* editors, Anna and Ted Leighton at leighton@sasktel.net or (306) 665-6074.

CORRIGENDUM

Paul Geraghty's field sketches of Myrtle Warbler, Kingfisher and Horned Grebe that appeared in the September 2006 issue were incorrectly attributed to R. E. Gehlert in the 2006 Illustration Index in the December 2006 issue. We apologize to Paul for this error.

THIS ORGANIZATION RECEIVES FUNDING FROM:



65th ANNUAL SASKATCHEWAN CHRISTMAS BIRD COUNT–2006

ALAN R. SMITH, 115 Perimeter Road, Saskatoon, SK S7N 0X4 and ROBERT E. JOHANSON, 406 125 5th Avenue N, Saskatoon, SK S7K 6A5

The counts

Only 92 Christmas Bird Counts were submitted this year, the fewest since 1996. There are a couple of reasons for the low number. Firstly, for the first time in 30 years there were no counts from either Fort Walsh or Govenlock. Although it sadly signals the end of an era, we thank Guy Wapple, Val Harris, Sheila Lamont and the late Wayne Harris for their long-term commitment to these and other counts across the province. A less certain factor for fewer counts was the weather. A long, cold and snowy late fall and early winter may have resulted in some early cocooning by a number of compilers.

On the positive side, some new or revived counts were conducted. New counts were received from Creighton in the northeast of the province and Senate in the extreme southwest. Dormant counts were revived at Beauval and Dalmeny. The latter was an unabashed, but successful, attempt to add a new species to the list of birds recorded on the Saskatchewan CBC (see **New Species**). Another plus in 2006 comes from Val Marie where the entire school, both teachers and students, participated.

The birds

The number of birds counted was down significantly from last year (133,154 to 93,185). Most of the decline was due to lower numbers of

Canada geese (33,482 to 5,301) and Mallard (18,220 to 5,135), which were denied access to field feeding by the heavy accumulation of snow. These two water birds aside, the number of land birds was up over last year.

The 98 species on count day and 100 for the count period are about average for the last decade. For the fifth year in a row Saskatoon won the crown for the most species, with 40 species on count day and another two during the count period. Regina came close to reclaiming the crown which it held for most of the years from 1956 to 1976; observers there spotted 39 species plus another two during the count period.

Population trends

The 2006 CBC saw significant increases in upland game birds over last year, and to a lesser extent over the long term (Table 7). There was resurgence in Pine Grosbeaks and Redpolls. Note the tremendous increase in Common Redpolls over last year. Note also that there is no figure in Table 7 for the percent increase in Hoary Redpolls over last year as there were none recorded last year. Another finch, the Gray-crowned Rosy-Finch, was more widespread than usual, venturing outside its normal winter range in the southwest to appear on five counts north to Beauval and east to MacNutt.

This count saw declines, especially as compared to the last five years, of several species that are traditionally considered "summer birds"; these included the American Robin, Cedar Waxwing and Dark-eyed Junco (Table 7).

The numbers of the House Finch have declined slightly for the second year in a row. The range expansion by this species appears to be on hold as well; the only new CBC locality is Spalding on the northeast edge of its current range.

Eurasian Collared-Doves continue to increase, with a new high count of 46 birds on the Swift Current count (Table 6) and another 56 birds on five other counts. Our native dove, the Mourning Dove, was more abundant this winter as well. Averaging fewer than one bird per year, the species was recorded on seven counts across the province. Similarly, the Sharp-shinned Hawk was recorded on 7 counts while it is normally recorded about once every other year.

A few other records for previous high counts were broken. A 35 year old record for Willow Ptarmigan was broken with 35 seen on the new Creighton count. For the second year in a row, a new high count was set for Common Ravens with the 683 birds seen on 27 December at La Ronge.

New Species

The subject of much excitement and a note in the December 2006 issue of *Blue Jay*, a Curve-billed Thrasher was recorded on the Dalmeny count on 15 December. The bird disappeared soon after the count was conducted. This brings the overall total number of species recorded on the Saskatchewan CBC to 182 species.

On his Endeavour count, Norman Harris reported a plain chickadee-like bird with a crest; his description best fits a titmouse, either a Juniper or Oak Titmouse.

Other rarities

A Hermit Thrush at Regina was our third record, while a Yellow-bellied Sapsucker at Estuary North and a Brown Thrasher at Good Spirit Lake were only the fifth records of these species.

Count areas and participants

(Names of compilers are in italics).

1. ARCHERWILL. Doris Dewhurst, Joanne Folstad, Ken Folstad, Gerald Hiron, Susan Hiron, *Elaine Hughes*, Dorothy Klettberg, Willie Klettberg, Judy Revoy, Stan Revoy, Carol Sigfrid, Linda Winnichyn, Morris Winnichyn.
2. ARMIT. *Val Harris*, Sheila Lamont, Joyce Zak.
3. BANGOR. *Allan Bolton*, *Lynn Bolton*, Alan Hayward, Aileen Hayward, John Maddaford, Leslie Maddaford, Bev McLaren, Raye McLaren.
4. BEAUVAL. Clara Sanderson, *Rick Sanderson*.
5. BIG RIVER. *Glen Honig*.
6. BIGGAR. Dale Booth, Murray Newton, Mark Pickett, Linda Schnedar, Lorrie Sielski, Larry Sutherland, Lorne Sutherland, Brandon Wapple, *Guy Wapple*, Marguerite Wapple, Rob Wapple, Sandra Wapple.
7. BIRCH HILLS. Carman Dodge, Margaret Mareschal, *Moe Mareschal*, Don Weidl.
8. BRIGHTWATER RESERVOIR. Keith Hobson, *Alan Smith*.
9. BROADVIEW. *David Chaskavich*, Barbara Weidl, Don Weidl.
10. BROMHEAD. Martin Bailey, *Carol Bjorklund*, John Whitell.
11. CABRI. *Carman Dodge*.
12. CANDLE LAKE. Carman Dodge, Ron Jensen, Moe Mareschal, *Don Weidl*.
13. CHRISTOPHER LAKE. *Jeannie Walker*.

14. CLARK'S CROSSING. Carol Blenkin, Eveline Boudreau, Lucille Bradatsch, Donna Bruce, Yvonne Cuttle, Marilyn Haskins, Ron Jensen, Robert Johanson, Richard Kerbes, Heney Klypak, Gordon Koshinsky, Margaret Koshinsky, Bill MacKenzie, Ted Melville, Hilda Noton, Nick Saunders, Jan Shadick, Stan Shadick, Naomi Soleil, Marten Stoffel, Mary Toews, *Michael Williams*, Kay Willson, Philip Willson, Bruce Wilson.
15. CODETTE LAKE. *Doug Boivin*, Barb Weidl.
16. CRAVEN. Mary Aird, Betty Binnie, Lyn Brokofsky, Jim Cummings, Karen Elliott, Ruth Englund, *Trevor Herriot*, Paule Hjertaas, Louise Holloway, Phil Holloway, Bob Luterbach, Barbara Mader, Doug Mader, Barry Mitschke, Ron Myers, Jim Nordquist, Curtis Pollock, Jeannette Taylor, Mary Weber.
17. CREIGHTON. *Brenda Schmidt*, Harvey Schmidt.
18. CROOKED LAKE. *Boyd Metzler*, Pat Ward.
19. CROOKED RIVER. Helen Carson, Lyle Carson, Burnie Lewis, Joyce Lewis, *Margaret Mehler*, Morley Mehler, Shirley Wishart.
20. CYPRESS HILLS PROVINCIAL PARK (Centre Block). Ed Bath, Gary Churchill, Amy Krause, Daniel Krause, Rick Krause, Vicki Krause, David Larson, Margarette Larson, *Melody Nagel-Hisey*, Jenna Nicholls, Bruce Sims, Ruth Sims, Kathy Stasienko, Sam Suchorab.
21. DALMENY. Ryan Dudragne, David Fraser, *Alan Smith*, Phil Taylor.
22. DORINTOSH. Bernadette LeBoeuf, Marc LeBoeuf, *Joe Twidale*, *Lorraine Twidale*
23. DUCK LAKE. Robin Bloom, Keith Hobson, *Alan Smith*, Phil Taylor.
24. DUNDURN. Ken Gagnon, Mary Jane Gagnon, *Alan Smith*, Don Weidl.
25. EASTEND. Tom Donald, *Robert Gebhardt*, June Higgins, Joan Hodgins, Harvey Johnson, Lorne Scott, Keith Schuett, Mary Thomson, Heidi Topham.
26. ELLISBORO. *David Chaskavich*..
27. EMMA LAKE. *Deanna Krug*, Norman Krug, Donna Sylvester, Terry Sylvester.
28. ENDEAVOUR. *Norman Harris*.
29. ESTEVAN. Kathy Hedegard, *Guy Wapple*.
30. ESTUARY NORTH. Cathy Cocks, *Dean Francis*, Frances Hartsook, Walter Steinley.
31. FENTON. *Carman Dodge*, Moe Mareschal, Don Weidl.
32. FORT QU'APPELLE. James Armstrong, Phyllis Bordass, *Ronald Hooper*, Alice Isfan, Tim Keepness, Vic Lamontagne, Jack Lowe, Jean McKenna, Allan Mlazgar, Paul Paquin, Keith Stephens, Kim Stevenson, Ted Stevenson, Wendy Thorn, Elaine Willox.
33. GARDINER DAM. Ryan Dudragne, Greg Fenty, Ron Jensen, Nick Saunders, Stan Shadick, Marten Stoffel, *Guy Wapple*, Dan Zazelenchuk.
34. GOOD SPIRIT LAKE. *Bill Anaka*, Joyce Anaka, Dorothy Riesz, Ray Riesz, Lloyd Wilson, Marj Wilson, Julia Wiwchar.
35. GRASSLANDS NATIONAL PARK. Twila Hayes, *Allison Henderson*, Laura Henderson, Johanna Jensen, Dwight Olson, Susan Robertson, Colin Schmidt, Gabrielle Schmidt, Robert Sissons, Adrian Sturch, Tamara Sturch.
- Val Marie School:** Teachers: Angie Clement, Judy Facette, Shannon McLeod.
Students: Hunter Acker, Karissa Duquette, Kaila East, Cheyenne Grant, Harlan Gunter, Lance Gunter, Riley Hayes, Wyatt Hayes, Cassy James, Cody James, Dylan Larson, Adam Laternus, Shelby Laternus, Damon Legault, Haley Olson, Tyrell Olson, Mathew Palaschak, Jason Perrault, Zoe Stromberg, Caitlin Wall.
36. GRAYSON. Carina Helm, *Charles Helm*, Daniel Helm, Karl Zimmer.
37. HARRIS. Betty Selsey, Fred Selsey, Brandon Wapple, *Guy Wapple*.
38. HEPBURN. *Phyllis Siemens*.
39. HUDSON BAY. Donna Coates, Gerald Coates, *John Daisley*, Rosalie Daisley, Rachael Grenier, Les Hayes, Joyce Hayes, Agnes Lewellin, Laurie Nielsen, Ron Shepard, Bev Soules, Gloria Stang, Cheryl Thacker.
40. KELVINGTON (Roscommon School District). Pat Finnie, *Dianne Sloan*, Marguerite Sloan.
41. KENASTON. Doug Beckie, *Lawrence Beckie*, Margaret Beckie, Tyler Beckie.
42. KENOSEE LAKE. Boyd Metzler, *John Pollock*.
43. KETCHEN NORTH. *Dallas Fairburn*.
44. KILWINNING. *Ed Driver*, Margaret Driver.

45. KINDERSLEY NORTH. *Jean Harris, Keith Harris.*
46. KINLOCH. Elaine Asbjornhus, Wayne Fletcher, *Don Forbes, Doreen Forbes, Cliff Logan, Doreen Wickstrom.*
47. KUTAWAGAN LAKE. *Val Harris, Sheila Lamont.*
48. KYLE. Ralph Barlow, Shirley Hesla, Sig Jordheim, Cody Lewis, Greg Nelson, Glen Pederson, Bill Stepple, *Dan Zazelenchuk.*
49. LA RONGE. Syd Robinson, *John Schisler, Jan Shewchuk, Karen Waters.*
50. LAST MOUNTAIN LAKE N.W.A. Ross Dickson, *Val Harris, Kerry Hecker, Sheila Lamont, Lois Vanthuynne.*
51. LEADER NORTH. *Daisy Meyers.*
52. LOVE - TORCH RIVER. *Bert Dalziel, Duke Dalziel, Joan Dalziel, Jody Dalziel, Sara Dalziel, Scott Edwards, Elaine Inkster, Ione Isbester, Rosanne Kirkpatrick, Ron Knutson, Bill Matthews, Lynn Matthews, Bev Macauley, Dave Macauley, Lillian Nessel, David Pratt, Sandra Topp.*
53. LUSELAND. Kelly Cotter, Estelle Finlay, Graeme Finley, *Kim Finley, Liam Finley, Robert Finley, Valerie Finley, Don Martfeld, Glen Martfeld.*
54. MACNUTT. John Skinner, *Tim Wendell, Dwight Wendell.*
55. MAYVIEW. *Judith Graham.*
56. MEADOW LAKE. Bill Caldwell, Janet Caldwell, *Bob Wilson, Ian Wilson.*
57. MOOSE JAW. Elsie Carrick, *Donna Cork, Ron Cork, Diana Humenick, Leith Knight, Bill McDonald, Elsie Meecher, Jean Ann Mowchenko, Len Mowchenko, Marj Nichol, Helen Norys, Peter Norys, Darol Owens, Linda Owens, Don Parr, Elizabeth Travis, Sheina Wait, Brenda Winch.*
58. MOOSE MOUNTAIN. Bob Cameron, Kathy Hedegard, Doyle Thomas, *Val Thomas.*
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60. NIPAWIN. *Carol Blenkin, Vi Budd, Joyce Christiansen, Rose-Marie Cornand, Bert Dalziel, Joan Dalziel, Sara Dalziel, Shirley Harstad, Wally Harstad, Cary LeCuyer, Jennette LeCuyer, Jesse LeCuyer, Kyla LeCuyer, Wally Mollberg, Doug Phillips, Peter Phillips, Shirley Phillips.*
61. NISBET FOREST, NORTHWEST. *Sandra Jewell.*
62. NISBET FOREST; WEST. *Kim Clark, Kiri Clark, Shamara Clark, Suzanne Clark, Evelyn Marshall, Jerry Perkin.*
63. PIERCE LAKE. Bill Bretsch, Martha Hayward, *Ted Hindmarsh, Richard Klauke, Taylor Rhyason.*
64. PIKE LAKE. Bob Armstrong, Alison Baudru, Lawrence Beckie, Lucille Bradatsch, Donna Bruce, Ann Christensen, Jill Cornford, Peter Cornford, John Crawford, Yvonne Cuttle, Lorne Duczek, Ryan Dudragne, Betty Ann Dunlap, Mary Jane Eley, Cathy Fry, Joe Fry, Valerie Girling, Bob Girvan, Donna Haugen, Dave Horn, Ron Jensen, Robert Johanson, Peter Jonker, Marlene Kalanack, Barbara Kowaliuk, Nicholas Kowaliuk, Greg Kratzig, Bill Mackenzie, Ted Melville, Maxine Morrison, Daniel Neves, Vera Neves, Hilda Noton, Keith Pahl, *Frank Roy, Nick Saunders, Marten Stoffel, Mercedes Wayman, Michael Williams.*
65. PRINCE ALBERT. Ralph Abrey, Flo Bowman, John Burt, Pam Burt, Kim Clark, Kiri Clark, Shamara Clark, *Carman Dodge, Keith Dodge, Sandra Jewell, Bea Nelson, Cheryl Newman, Don Weidl, Shyla Wilkinson, Travis Wilkinson.*
66. PRINCE ALBERT NATIONAL PARK. Doreen Collingwood, Lorie Collingwood, Jim Durrin, *Dan Frandsen, Carleen Gorecki, Bernadette Horne, Fiona Moreland, Eva Paul, Alena Peterson, Marcus Peterson, Adam Pidwerbeski, Samuel Pidwerbeski, Glenn Rupert, Norm Stolle.*
67. QU'APPELLE VALLEY DAM. Ryan Dudragne, Ron Jensen, Robert Johanson, Frank Roy, Nick Saunders, Jan Shadick, Stan Shadick, Marten Stoffel, Guy Wapple, *Michael Williams, Bruce Wilson.*
68. RAYMORE. *Val Harris, Sheila Lamont.*
69. REGINA. Alana Block, Lionel Bonneville, Stephane Bonneville, Allan Brokofsky, Lyn Brokovsky, Peter Campbell, Tony Davidson, Jim Elliott, Ruth Englund, Bob Ewart, Shirley Friel, Brenda Graham, Trevor Herriot, *Dale Hjertaas, Paule Hjertaas, Phyllis Ilsley, John Kramer, Stuart Kramer, Rhéal Laroche, Gilly Liebelt, Bob Luterbach, Lauren Mang, Ross Pettigrew, Brian Rainey, Chris Ruddick, Margaret Skeel, Frank Switzer, May Switzer.*
70. ROULEAU. Yvonne Bean, Alien McGratten, Noreen McGratten, Clayton Spalding, *Patricia Sterzuk, Linda Thome.*
71. ROUND LAKE (Qu'Appelle Valley). *Boyd Metzler, Pat Ward.*

72. SALTCOATS. Robert Barnhart, Arden Bradford, Donna Bradford, Irene Bobyk, Joan Farquharson, Walter Farquharson, Jim Jowsey, *Shirley Jowsey*, George Maben, Kerrie Rooke, Stewart Rooke, John Sawkey, Val Trowell, Marie Willis, Rob Wilson.

73. SASKATCHEWAN LANDING PROVINCIAL PARK. Sig Jordheim, Theresa Kotasek, Jim Lewis, Greg Nelson, Yvonne Nelson, Glen Pederson, *Dan Zazelenchuk*.

74. SASKATCHEWAN RIVER FORKS. Carman Dodge, *Don Weidl*.

75. SASKATOON. Joan Acton, Don Adams, Darlene Aikman, Ray Aikman, Juhachi Asai, Kengo Asai, Sumiko Asai, Alison Baudru, Neva Bayliss, Elizabeth Bekolay, Geoff Benson, Judith Benson, Bob Besant, Jim Beveridge, Lorna Beveridge, Janny Bos, Annemarie Buchmann, Eveline Boudreau, Attila Chanady, Kelly Chessie, Michael Chorney, Arla Christensen, Bob Clark, Teri Clark, Louise Cook, Paul Coutu, Vi Coutu, Ewen Coxworth, Yvonne Cuttle, Eileen Daghish, Ron Delver, Lorne Duczek, Erwin Dueck, Katie Dueck, Anne Dzus, John Dzus, Marlene Dzus, Tom Dzus, Melanie Elliott, Helen Fast, Joan Feather, David Forbes, Jessica Ford, Cathy Fry, Joe Fry, Mary Gilliland, Bob Godwin, Mike Gollop, Jean Gordon, Bob Green, May Haga, Anne Hanbidge, Helen Hanbidge, John Hanbidge, Katie Hanbidge, Marlene Hanbidge, Peter Hardie, Stuart Houston, Andrea Hull, Richard Kerbes, Eric Koshinsky, Gordon Koshinsky, Margaret Koshinsky, Kay Krueger, Anna Leighton, Patrick Leighton, Ted Leighton, Bill MacKenzie, Terry McCawley, Bob McNaughton, Bev McNaughton, Carol Meeres, Kathy Meeres, Ted Melville, Cathryn Miller, David Miller, Larry Mitchell, Hilda Noton, Ken Nyeste, Keith Pahl, Wendy Paterson, Alison Philips, Amanda Plante, Marella Rosta, Mary Jean Roy, Craig Salisbury, Lorriene Salisbury, Robert Salisbury, Trish Santo, Scott Saretsky, Nick Saunders, Marjorie Scharf, Maureen Scharf, Murray Scharf, Albert Schondelmeier, Jim Smart, Janice Solem, Marten Stoffel, Christopher Taylor, Philip Taylor, Heather Wagg, Shirley Wedgwood, George West, Zane Wilcox, *Michael Williams*, Phil Willson, Jim Wood, Stan Woynarski, Dan Zazelenchuk, Brenda Zeman, Norman Zlotkin.

76. SENATE. *Don Weidl*.

77. SHAMROCK. Mike Francis, Donna Heinrichs, Gladys Heinrichs, *Hugh Henry*.

78. SKULL CREEK. Alyson Bennetto, Erin Bennetto, *Ray Bennetto*, Sharon Bennetto.

79. SNOWDEN. Eleanor Bodnaruk, Ann Boehler, Lorne Butterfield, Sylvia Debblor, *Irene Hagel*, Ernie Hall, Betty Hiel, Doreen Long, Carol Muir, Karen Priestley, Valerie Rein, Vera Schemenauer, Vicky Schwetz, Bev Smears, Irene White.

80. SOMME. Edwin Billeter, Lyle Birch, Sharon Birch, Edwin Brehmer, Irene Brehmer, Florence Chase, Mike Grywacheski, Eldon Hooper, Margaret Hooper, *Ronald Hooper*, Gordon Johnson, Elsie Kerr, John Kozial.

81. SPALDING, Bill Spizawka, *Velma Spizawka*.

82. SPINNEY HILL. *Ed Driver*, Margaret Driver.

83. SQUAW RAPIDS. Ryan Dudragne, *Val Harris*, Sheila Lamont, Nick Saunders, Guy Wapple.

84. STENEN (Crystal Lake). *Frances Buryk*, Peter Buryk.

85. SWIFT CURRENT. James Beattie, Jackie Bolton, Norris Currie, Laurent Dudragne, Mary Ann Dudragne, Ryan Dudragne, Karen Gornick, Katie Hagman, Norma Hain, Gerald Handley, Hugh Henry, Bob Jensen, Thomas Kirk, Mrs. Kirk, Arlyne Lawson, Connie Lendrum, Sue McAdam, Leona Nein, Darla Osborne, Bev Parchman, Janet Payne, Myra Smith, Harold Steppuhn, Suh Steppuhn, John Stephenson, *Irene Stinson*, Kae Waters, Velma Wilson.

86. TOGO. Arlene Arnott, Don Brock, Marlene Brock, Donna Dewores, Barb Elsasser, *Doug Elsasser*, Amanda Harper, Edward King, Louise King, Edith Mann, Cindy Tomochko, Jim Tomochko, Claudia Zengl.

87. TURTLE LAKE. *Barb Muirhead*, *Vic Muirhead*, Merle Robinson.

88. TURTLEFORD. Hank deGraaf, *Brent Keen*, Louise Lundberg, Richard Roney, Marg Uhlig, David Wooff.

89. WEYBURN. Bob Cameron, Lucille Cameron, *Ross Douglas*, Gladys Fleming, Glen Fleming, Alma McCormick, Vic Messer, April Sampson, Doyle Thomas, *Val Thomas*, Myrt Thorson, John Whitell.

90. WHITE BEAR. Darryl Jordheim, Gary Jordheim, *Sig Jordheim*, Elijah McCulloch, Greg McCulloch, Lynette McCulloch.

91. WHITEWOOD. Butch Ashfield, Paul Ashfield, Tom Ede, Joyce Jordan, Joyce Kydd, Florence Luhtala, Jean Meadows, *Boyd Metzler*, John Pollock, Florence Pritchard, Lenore Santo, Carol Sawatzki, Diane Veresh, Pat Ward.

92. YORKTON. *Bill Anaka*, Joyce Anaka, Pat Fletcher, Cheryl Fraser, Norm Fraser, Bob Graham, Margaret Graham, Harley Large, Ruth Large, George Maben, Kathy Morrell, Dorothy Riesz, Ray Riesz, Geoff Rushowick, Patrick Rushowick, Dorothy Skene, Harold Wilkinson, Lloyd Wilson, Marj Wilson.

Table 1-1 Weather and Conditions

Locality	Date	Minimum Temp. (°C)	Maximum Temp. (°C)	Minimum Wind (km/hr)	Maximum Wind (km/hr)	Minimum Snow (cm)	Maximum Snow (cm)	Sky A.M.	Sky P.M.	Wild Fruit
Archerwill	Dec 18	-20	-10	10	20	30	30		overcast	p
Armit	Dec 31	-15	-10	6	11	15	20	clear	mostly clear	p
Bangor	Dec 18	-21	-13	2	5	10	16	cloudy	cloudy	p
Beauval	Jan 2	-10	-4	0	5	30	66	clear	partly cloudy	f
Big River	Dec 28	-12	-5	2	5			clear	clear	f
Biggar	Dec 27	-19	-12	0	10	0	40	partly cloudy	partly cloudy	f
Birch Hills	Dec 20	-8	-3	3	15	30	60	mostly clear	mostly clear	g
Brightwater Res.	Jan 5	-9	-5	0	5	0	30	clear	mostly clear	p
Broadview	Dec 23	-9	-4	0	5	5	12	clear	clear	p
Bromhead	Jan 3	5	7	25	35	0	0	mostly clear	mostly clear	
Cabri	Dec 23	-6	0	25		0	0	overcast	overcast	
Candle Lake	Dec 28	-13	-8	5	5	20	25	partly cloudy	mostly clear	p
Christopher Lake	Jan 4	-3	-1	2	5			cloudy	partly cloudy	p
Clark's Crossing	Dec 16	-8	-6	32	45	20	60	blizzard	light snow	p
Codette Lake	Dec 31	-12	-7	2	16	0	70	clear	clear	p
Craven	Dec 16	-8	-2	35	70	5	100	partly cloudy	cloudy	g
Creighton	Dec 30	-16	-8	11	18	100	129	clear	partly cloudy	e
Crooked Lake	Dec 27	-11	-5	0	5	5	60			p
Crooked River	Dec 30	-15	-5	2	25	30	35	clear	partly cloudy	g
Cypress Hills PP	Dec 29	4	10	0	20	5	36	mostly clear	light fog	g
Dalmeny	Dec 15	-3	4	10	20	20	35	overcast	heavy snow	p
Dorintosh	Dec 27			2	5	30	50	partly cloudy	partly cloudy	f
Duck Lake	Dec 29	-18	-10	0	15	20	40	clear, fog	clear	p
Dundurn	Dec 31	-15	-7	0	5	10	15	clear	partly cloudy	p
Eastend	Jan 1	-14	-5	8	12	0	30	mostly clear	mostly clear	f
Ellisboro	Jan 2	-2	3	20	20	5	12			
Emma Lake	Jan 4	-2	-1	12	25	30	40	cloudy	overcast	g
Endeavour	Dec 26	-10	-2	2	5	33	43	cloudy	clear	p
Estevan	Jan 4	-7	-2	0	30	0	5	mostly clear	partly cloudy	p
Estuary North	Jan 4	-7	-5	0	5	0	10	mostly clear	mostly clear	g
Fenton	Dec 18	-15	-7	3	5	30	35	mostly clear	mostly clear	
Fort Qu'Appelle	Dec 16	-7	-7	30	30	30	30	cloudy, snow	cloudy, snow	f
Gardiner Dam	Dec 18	-15	-8	10	20	0	45	mostly clear	partly cloudy	f
Good Spirit Lake	Dec 15	-8	-5	10	30	40	60	overcast	heavy snow	f
Grasslands NP	Dec 21	-5	0	10	30	0	20	clear	clear	g
Grayson	Dec 27	-7	0	0	10	10	50	mostly clear	mostly clear	
Harris	Dec 30	-12	-5	0	30	0	40	partly cloudy	partly cloudy	f
Hepburn	Dec 20		-7	2	5		25	mostly clear	mostly clear	e
Hudson Bay	Jan 5	-14	-10	0	0	70	80	cloudy		f
Kelvington	Dec 30	-9	-8	2	5	30	60	mostly clear	clear	p
Kenaston	Dec 20	-8	-3	8	8	10		clear	clear	
Kenosee Lake	Jan 3	3	5	40	40	0	40	mostly clear	clear	f
Ketchen North	Dec 26	-12	-8	10	25	45	60	mostly clear	clear	
Kilwinning	Dec 22	-7	0	5	10	10	35	clear	clear	p
Kindersley North	Dec 26	-3	-1	0	5	0	3	clear	clear	f

Table 1-2 Weather and Conditions

Locality	Date	Minimum Temp. (°C)	Maximum Temp. (°C)	Minimum Wind (km/hr)	Maximum Wind (km/hr)	Minimum Snow (cm)	Maximum Snow (cm)	Sky A.M.	Sky P.M.	Wild Fruit
Kinloch	Dec 14	-10	-8	2	6	28	35	mostly clear	cloudy, fog	p
Kutawagan	Dec 27	-7	-1	2	5	5	15	partly cloudy	overcast	p
Kyle	Dec 28	-11	-4	3	25	0	40	overcast	snow	f
LaRonge	Dec 27	-20	-12	2	5	30	40	mostly clear	mostly clear	f
Last Mountain Lake	Dec 29	-20	-12	2	5	5	30	heavy fog	clear	p
Leader North	Dec 30	-10	-5	0	2	15	40	mostly clear	partly cloudy	g
Love-Torch River	Dec 26	-18	-5	10	35	25	45	clear	clear	p
Luseland	Dec 26	-10	-5	2	5	4	22	mostly clear	mostly clear	g
MacNutt	Dec 27	-15	-11	0	2	25	30	partly cloudy	partly cloudy	f
Mayview	Jan 2	-13	-5	0	5	61		mostly clear	partly cloudy	f
Meadow Lake	Dec 26	-15	-15	5	5	20	25	clear	clear	p
Moose Jaw	Dec 15	-15		12	39	3	12	mostly clear	overcast	g
Moose Mountain	Jan 2	-1	0	2	4	3	10	partly cloudy	mostly clear	f
Morse	Jan 2	2	5	5	30	2	15	mostly clear	partly cloudy	g
Nipawin	Dec 30	-11	-5	5	22	20	50	overcast	overcast	p
Nisbet Forest NW	Dec 23	-10	-5	0	9	9	57	clear	clear	f
Nisbet Forest West	Dec 26	-10	-5	0	10	12	25	partly cloudy	mostly clear	f
Pierce Lake	Dec 31	-10	-2	13	7	45	55	mostly clear	partly cloudy	
Pike Lake	Jan 2	-3	-2	9	17	20	40	mostly clear	cloudy	
Prince Albert	Dec 17	-14	-8	4	10	35	40	mostly clear	mostly clear	p
Prince Albert NP	Dec 21	-10	-5	2	5	40	60	clear	clear	g
Qu'Appelle Dam	Dec 17	-15	-9	0	13	10	35	mostly clear	partly cloudy	p
Raymore	Dec 26	-9	-6	2	5	10	30	mostly clear	mostly clear	p
Regina	Dec 26	-13	-6	4	9	20	40	clear	partly cloudy	f
Rouleau	Jan 1	-18	-12	2	5			clear	clear	p
Round Lake	Dec 20	-6	-2	0	20	5	50	clear	clear	p
Saltcoats	Dec 29	-16	-14	2	5	20	25	clear	clear	e
Sask. Landing PP	Dec 31	-16	0	0	5	5	30	clear	clear	f
Sask. R. Forks	Dec 19	-6	4	0	4	35	40	partly cloudy	partly cloudy	p
Saskatoon	Dec 26	-15	-7	0	18	30	50	clear	partly cloudy	p
Senate	Jan 1	-10	-5	0	10	5	10	mostly clear	partly cloudy	p
Shamrock	Dec 31	-8	-3	0	5	8	50	partly cloudy	partly cloudy	
Skull Creek	Dec 27	-5	5	8	16	0	5	mostly clear	mostly clear	f
Snowden	Dec 30	-20	-9	9	35	13	37	clear	mostly clear	f
Somme	Dec 27	-16	-14	0	0	50	50	clear	clear	f
Spalding	Dec 19	-4	0	2	5			mostly clear	clear	p
Spinney Hill	Dec 14	-6	-4	0	12	15	40	fog	clear	p
Squaw Rapids	Jan 1	-15	-10	30	39	30	60	mostly clear	mostly clear	f
Stenen	Jan 1	-10	2	2	5		51	clear	clear	p
Swift Current	Dec 30	-8	-2	6	11	10	60	clear	mostly clear	f
Togo	Jan 4	-2	0	15	20	20	30	overcast	light snow	f
Turtle Lake	Jan 5									
Turtleford	Dec 29	-8	-4	2	5	15	50	partly cloudy	mostly clear	f
Weyburn	Dec 16	-2	0	40	60	5	12	cloudy	mostly clear	
White Bear	Dec 26	-7	0	0		0	2		mostly clear	
Whitewood	Dec 30	-11	-7	6	19	20	70	partly cloudy	overcast	p
Yorkton	Dec 21	-1	1	15	20	35	50	clear	clear	f

wild fruit crop: poor, fair, good, excellent

Table 2-1 Coverage

Locality	Effort						Habitat														
	Participants	Km on Foot	Hours on Foot	Km by Vehicle	Hours by Vehicle	Hours at Feeders	Evergreen Forest	Mixed Forest	Deciduous Forest	Aspen / Farmland	Aspen / Prairie	Native Prairie	Tame Pasture	Farmland	Farmstead	Urban	Open Water	Riparian	Muskeg	Landfill	
Archerwill	13	7.0	2.5	40	1.0	15		30					5	50	4		1				
Armit	3	2.0	0.8	279	8.0	0.5	15	40		20					10	15					
Bangor	8			20	2.0	9.0				30	10		10		50						
Beauval	2	2.0	2.0	66	3.0	2.0	30	40	10							15				5	
Big River	1		1.0			3.0	90	10													
Biggar	11	6.0	5.3	525	20	8.0				16				54		30					
Birch Hills	4	4.0	3.0	107	14	3.0				5	40			35	5	5	5				
Brightwater Res.	2	4.0	2.0		5.5					10	15		5	45	20		5				
Broadview	3	4.0	1.8	127	6.3	2.0				20	40		5	25	5	5					
Bromhead	3	1.0	0.5	128	4.0									95	5						
Cabri	1	1.0	0.3	127	3.2																
Candle Lake	4	4.0	2.5	154	9.5		25	30	30							15					
Christopher Lake	1	10	4.0					90									10				
Clark's Crossing	25	14	11	510	23	2.0				35	3	1	3	6	22	18	1	10			1
Codette Lake	2	3.0	1.0	116	4.0	0.5		20		70		10									
Craven	19	9.0	5.0	542	20	1.0				20			5	25	20	25	5				
Creighton	2	2.0	1.0	156	7.0	1.0	10	10	10							5	1			64	
Crooked Lake	2	2.0	1.0	181	5.0					40	30				10	10	10				
Crooked River	7		0.5		1.5	9.0		40						40	20						
Cypress Hills PP	14	15	65	10	2.0	33	60	20		10		5			5						
Dalmeny	4	2.0	1.0	127	6.5	1.0				5	35		5	35		20					
Dorintosh	4	16	8.0	60	4.0	4.0		60						40							
Duck Lake	4	7.0	2.5	85	5.5	0.3	10	40	10	10				15	5	10					
Dundurn	4	1.0	0.5	136	7.5	0.3				10	20	5	5	10	40	5	5				
Eastend	9	8.0	2.5	80	8.5	1.5		5		10	20	20	5	20	10	10					
Ellisboro	1			75	3.0	3.0								50					50		
Emma Lake	4	2.0	1.5	52	5.0	6.0		95							5						
Endeavour	1	1.5	3.0	30	2.0	2.0		10		20					40	30					
Estevan	2	2.0	1.8	161	7.3	1.0								28		25	8	39			
Estuary North	4	3.0	2.0	90	7.0					70		10		15	5						
Fenton	3	1.5	1.5	112	4.5											50	50				
Fort Qu'Appelle	15	1.0	1.0	100	12					25	25				25	15	10				
Gardiner Dam	8	10	10	432	16					9				64		2	17	8			
Good Spirit Lake	7		0.5	95	6.0	3.0		5	5	5		5	5	30	5	40					
Grasslands NP	34	9.0	5.5	102	6.9							63	8	5		20					
Grayson	4	9.0	3.0	50	3.0	1.0				30	15	5		30	5	10	5				
Harris	4	3.0	2.5	162	6.5	2.0				17				64		19					
Hepburn	1			45	1.0					10				78	2	10					
Hudson Bay	13			20	1.0	20		10							70	20					
Kelvington	3			55	4.0	6.0				30				60	10						
Kenaston	4		1.0	125	4.5	1.0				10				80	5	5					
Kenosee Lake	2			135	6.0	0.5		5	40	10	5					40					
Ketchen North	1	0.5	1.0	50	1.5	6.5				30			20	20	20	10					
Kilwinning	2	3.0	1.0	150	5.5		9	6	30	50			5								
Kindersley North	2			83	4.0									8	30	60	2				

Table 2-2 Coverage

Locality	Effort						Habitat													
	Participants	Km on Foot	Hours on Foot	Km by Vehicle	Hours by Vehicle	Hours at Feeders	Evergreen Forest	Mixed Forest	Deciduous Forest	Aspen / Farmland	Aspen / Prairie	Native Prairie	Tame Pasture	Farmland	Farmstead	Urban	Open Water	Riparian	Muskeg	Landfill
Kinloch	6	11	4.0	120	5.0	6.0	25	10	20	30					15					
Kutawagan	2	2.0	1.0	237	7.0	0.8				20		15		40	10	15				
Kyle	8	6.0	4.0	327	21	1.0					2	26	5	63	1	1		2		
LaRonge	4			56	3.5	8.0	25	50	25											
Last Mountain Lake	5	1.0	0.5	282	8.0	0.7				20		10		40	10	20				
Leader North	1			30	2.0							25	50	25	25					
Love-Torch River	17	5.0	3.0	168	6.0	35	10	10		60					10	10				
Luseland	9	14	6.0	155	6.0	4.0				30	10	5	10	30	5	10				
MacNutt	3		5.0	120		4.0				70	10		15		5					
Mayview	1					8.0		90				10								
Meadow Lake	4	2.0	3.5	134	3.5	4.0	25			25				25		25				
Moose Jaw	18	6.0	3.0	244	22	27	4	5				11			4	76				
Moose Mountain	4		1.0		10			70				2		20	3	5				
Morse	9	3.0	0.6	231	19	1.0						3	90	7						
Nipawin	17	5.0	1.0	179	27	14	10	10		5				50	5	10	10			
Nisbet Forest NW	1		1.5			1.5		25							75					
Nisbet Forest West	6					18		50		50										
Pierce Lake	5	5.0	3.5	85	3.8			70		25							5			
Pike Lake	39	22	12	463	24	13				15	10		5	15	15	40				
Prince Albert	16	16	15	352	18	1.0														
Prince Albert NP	14	50	29					95								5				
Qu'Appelle Dam	11	4.0	3.9	501	14					15	20	15	10	10	10	5	10	5		
Raymore	2	1.0	0.8	250	7.5	0.5				25				40	10	25				
Regina	29	55	21	521	20	6.0				4	4	4	1	6	35	10	35	1		
Rouleau	6	2.0	1.0	221	22	4.0				5	5			80	5	5				
Round Lake	2	1.0	1.0	187	7.0					30	30				10	10	10	10		
Saltcoats	15	1.0	0.5	150	6.0	5.0				100										
Sask. Landing PP	7	18	13	264	16					20		25	5	39	1			10		
Sask. R. Forks	2	3.0	3.0	78	3.0		15	20	15	10			10	18	10		2			
Saskatoon	110	123	70	924	51	137	1	1	1	16	1	2	1	7	6	59	2	2		1
Senate	1	3.0	2.0	62	2.5							35	25	25	10	5				
Shamrock	4	1.0	0.5	157	7.0									80	20					
Skull Creek	4	10	4.0	40	4.0						10	10	10	60	10					
Snowden	15		1.5	130	3.5	5.5		10						30	50	10				
Somme	13		1.0	240	6.0	1.0		25	25					25	10	15				
Spalding	2	1.0	1.0	5	5.0	2.0				10	40			25		25				
Spinney Hill	2	2.0	0.5	146	6.0					12	38	30		10	20					
Squaw Rapids	5	7.0	4.0	346	13	0.3	10	55						15	10		10			
Stenen	2							75							25					
Swift Current	28	37	43	361	46	25						15	5	65	4	10	1			
Togo	13	3.0	1.0	35	3.0	20	5	20		30	20	10		10	5					
Turtle Lake	3																			
Turtleford	6	8.0	6.0	207	9.5	8.0				40				50	10					
Weyburn	11	2.5	0.5	271	5.0									x		x				
White Bear	6	6.0	6.0	40	2.0							50		40	10					
Whitewood	14	3.0	3.0	325	15	21				10	20				5	65				
Yorkton	19			169	11	3.0				5		3	2	35	5	50				

Table 3-1 Species found in 7 or more localities () = seen during count period

	Archerwill 18 Dec 2006	Armit 31 Dec 2006	Bangor 18 Dec 2006	Beauval 2 Jan 2007	Big River 28 Dec 2006	Biggar 27 Dec 2006	Birch Hills 20 Dec 2006	Brightwater Res. 5 Jan 2007	Broadview 23 Dec 2006	Bromhead 3 Jan 2007	Cabri 23 Dec 2006
Aves											
Canada Goose											
Mallard						1					250
Common Goldeneye											
Gray Partridge	(16)					49	79	8		44	36
Ring-necked Pheasant										42	
Ruffed Grouse	12	4	1	1					2		
Spruce Grouse				4							
Sharp-tailed Grouse	(1)	1	20	5		108		1	21	139	7
Bald Eagle	(1)							(1)			
Sharp-shinned Hawk	(1)										
Northern Goshawk				(1)		1					
Golden Eagle											
Merlin											
Prairie Falcon											2
Rock Pigeon	(33)					264	26	28	45	2	2
Great Horned Owl	(3)		2			2	3	(1)		7	3
Snowy Owl			1				1			1	
Downy Woodpecker	5	3	3	2	1	8	6		5		
Hairy Woodpecker	6	2	3	3	(1)	4	2		6		
Black-backed Woodpecker		1		(1)							
Northern Flicker						1					
Pileated Woodpecker	(3)				(1)						
Northern Shrike		1				1	1		1		
Gray Jay	3	5		3							
Blue Jay	19	17	1	9	4	5	4	1	1		1
Black-billed Magpie	14	25	7	35	2	159	43	32	19		23
Common Raven	12	27	7	76	10	25	19	8	16		
Horned Lark										80	12
Black-capped Chickadee	33	24	24	6	7	58	40	4	30		1
Boreal Chickadee	1					3					
Red-breasted Nuthatch		2				3			1		
White-breasted Nuthatch	2				1						
Brown Creeper						1					
American Robin	(1)										
European Starling						23	64		2	15	
Bohemian Waxwing				1		156	90	40	4		
Dark-eyed Junco						1		1			
Snow Bunting	(250)	49	150	6		1		2	18	258	253
Pine Grosbeak	209	11	4	36	6	33	2		1		
Purple Finch											
House Finch						54			1		
White-winged Crossbill		2									
Common Redpoll	348	82	26	40		868	682	528	46	2	10
Hoary Redpoll	1	3		6		5	4		1	12	
Pine Siskin											
Evening Grosbeak	21	35		40		(2)					
House Sparrow	32	5	43	11		760	70	92	228	186	235
Total Birds Count Day	719	299	292	311	31	2596	1136	745	455	845	835
Extra Birds Count Period	315			3	2	2	1	3	1		
Total Species Count Day	16	19	14	19	7	27	17	12	21	14	13
Extra Species Count Period	10			3	2	1	1	3	1		

Table 3-2 Species found in 7 or more localities () = seen during count period

Aves	Candle Lake 28 Dec 2006	Christopher Lake 4 Jan 2007	Clark's Crossing 16 Dec 2006	Codette Lake 31 Dec 2006	Craven 16 Dec 2006	Creighton 30 Dec 2006	Crooked Lake 27 Dec 2006	Crooked River 30 Dec 2006	Cypress Hills PP 29 Dec 2006	Dalmeny 15 Dec 2006	Dorintosh 27 Dec 2006
Canada Goose			109								
Mallard					(8)		15				
Common Goldeneye			20		3		2				
Gray Partridge			307	5	81			6		20	
Ring-necked Pheasant					1						
Ruffed Grouse	9				1			3	(1)		1
Spruce Grouse	4										
Sharp-tailed Grouse			7		10		4		1	15	
Bald Eagle			1								
Sharp-shinned Hawk											
Northern Goshawk			1				1				
Golden Eagle											
Merlin					1		1				
Prairie Falcon											
Rock Pigeon			139	16	6	70	49			2	
Great Horned Owl			2								
Snowy Owl			3								
Downy Woodpecker	1	1	14	1	5	1	4	5	6	3	2
Hairy Woodpecker	5		13	1	4	1	4	3	2	1	2
Black-backed Woodpecker	1										
Northern Flicker					2				1		
Pileated Woodpecker	1					(1)					
Northern Shrike					1						
Gray Jay	20	1		1		4		3			3
Blue Jay	7	3	6	12	29		5	12	2	2	6
Black-billed Magpie	10		159	28	44	5	15	9	6	43	
Common Raven	155	7	22	72	4	248	22	57	3	7	4
Horned Lark					3						
Black-capped Chickadee	53	23	99	15	67	10	64	18	180	16	18
Boreal Chickadee	38					(1)				1	
Red-breasted Nuthatch	2		1		1				22		
White-breasted Nuthatch	1				4		8			1	1
Brown Creeper									1		
American Robin					1						
European Starling			35								
Bohemian Waxwing			297		262	51			(200)	25	
Dark-eyed Junco					8				1		
Snow Bunting			143	41	156			(100)		161	50
Pine Grosbeak	59	15	12	37	8	7	33	44	1	5	20
Purple Finch					9						
House Finch					67					3	
White-winged Crossbill											
Common Redpoll	46	105	390	116	545	42	203	35	6	23	12
Hoary Redpoll			2		4	9	2	42			
Pine Siskin											
Evening Grosbeak		20		2				56			16
House Sparrow			1479	25	459	9	74	29		446	
Total Birds Count Day	416	175	3261	372	1790	492	506	323	233	776	135
Extra Birds Count Period					8	2		100	201		
Total Species Count Day	18	8	23	14	30	13	17	15	14	18	12
Extra Species Count Period					1	2		1	2		

Table 3-3 Species found in 7 or more localities () = seen during count period

Aves	Duck Lake 29 Dec 2006	Dundurn 31 Dec 2006	Eastend 1 Jan 2007	Ellisboro 2 Jan 2007	Emma Lake 4 Jan 2007	Endeavour 26 Dec 2006	Estevan 4 Jan 2007	Estuary North 4 Jan 2007	Fenton 18 Dec 2006	Fort Qu'Appelle 16 Dec 2006	Gardiner Dam 18 Dec 2006
Canada Goose							3059			411	950
Mallard							76			12	4315
Common Goldeneye							91			17	84
Gray Partridge	7	3	4			17	(13)	54	12		82
Ring-necked Pheasant			1				38	82			
Ruffed Grouse	2				(1)	1				(2)	
Spruce Grouse											
Sharp-tailed Grouse		16	29	4		4	30	105	1	2	4
Bald Eagle			1				1			1	33
Sharp-shinned Hawk											1
Northern Goshawk			1								1
Golden Eagle			(2)	1			1	1			3
Merlin			(1)								
Prairie Falcon			(1)					1			1
Rock Pigeon	18	16	15	14			90	26	4	1	67
Great Horned Owl		1	(2)					3	2	(1)	5
Snowy Owl											5
Downy Woodpecker	2	1	3	2	4	1	5	1	4	10	5
Hairy Woodpecker	3	2	1	2	6	3	2		2	9	2
Black-backed Woodpecker											
Northern Flicker			(1)								
Pileated Woodpecker					(2)			1			
Northern Shrike		1		1				1		(1)	
Gray Jay	3	1				1					
Blue Jay	1		1	5	13	2		7	5	39	4
Black-billed Magpie	18	59	68	24	4	6	20	57	44	18	124
Common Raven	27	13		25	55	13	1		65	34	19
Horned Lark		3	18				(7)		2	(1)	25
Black-capped Chickadee	18	21	23	4	132	5	22	19	28	59	33
Boreal Chickadee	1				13						
Red-breasted Nuthatch	2		13		3		1			1	
White-breasted Nuthatch			(1)		12	1	7		1	9	
Brown Creeper					1						
American Robin							(1)	1		(2)	
European Starling			15	36		3				(10)	24
Bohemian Waxwing		68	47	(20)				300		203	56
Dark-eyed Junco			3			1	11	1			
Snow Bunting	2			5		35	36	15	53	10	217
Pine Grosbeak	27	7	9	4	48	6	11	8	14	19	18
Purple Finch							3			(1)	
House Finch			(5)				3			19	
White-winged Crossbill			5								4
Common Redpoll	14	97	122	120	73	40	28	75	134	101	252
Hoary Redpoll		2		12		1			2	(1)	2
Pine Siskin											
Evening Grosbeak						1				(2)	
House Sparrow	151	83	91	7		5	210	26	25	130	564
Total Birds Count Day	298	394	471	266	364	148	3793	787	398	1106	7043
Extra Birds Count Period			20	80	4		22			29	
Total Species Count Day	16	17	21	16	12	20	32	23	17	21	37
Extra Species Count Period			9	2	3		4			16	

Table 3-4 Species found in 7 or more localities () = seen during count period

Aves	Good Spirit Lake 15 Dec 2006	Grasslands NP 21 Dec 2006	Grayson 27 Dec 2006	Harris 30 Dec 2006	Hepburn 20 Dec 2006	Hudson Bay 5 Jan 2007	Kelvington 30 Dec 2006	Kenaston 20 Dec 2006	Kenosee Lake 3 Jan 2007	Ketchen North 26 Dec 2006	Kilwinning 22 Dec 2006
Canada Goose											
Mallard			6								
Common Goldeneye			5								
Gray Partridge	24			33				5			
Ring-necked Pheasant		30									
Ruffed Grouse	3					6	3		1	6	1
Spruce Grouse						4					
Sharp-tailed Grouse		12	6	16	3	2			12		6
Bald Eagle											
Sharp-shinned Hawk											
Northern Goshawk											
Golden Eagle		1									
Merlin											
Prairie Falcon											
Rock Pigeon	21	60	37	78		7	19	5	4	12	
Great Horned Owl	(1)		1	1				(1)			
Snowy Owl	(2)			2				1			
Downy Woodpecker	3	2	1		(1)	11	8	(1)	2	3	2
Hairy Woodpecker	4		3			8	7	(1)	2	5	1
Black-backed Woodpecker											
Northern Flicker											2
Pileated Woodpecker	(1)					1				(1)	
Northern Shrike	1										
Gray Jay						9					
Blue Jay	4		4		(3)	29	10		30	11	15
Black-billed Magpie	29	12	7	83	1	4	6	29	7	32	111
Common Raven	19		6	18		165	16	5	4	25	25
Horned Lark		21									3
Black-capped Chickadee	24		22	6	3	90	18	6	62	16	36
Boreal Chickadee						4					3
Red-breasted Nuthatch						2			8		1
White-breasted Nuthatch	2		4			6			2	1	2
Brown Creeper											
American Robin											
European Starling		5				(1)					
Bohemian Waxwing	20		10	87					53		
Dark-eyed Junco						(6)				1	
Snow Bunting	235	120	87		40	12	(100)	350			40
Pine Grosbeak	21		42	6	(3)	106	48		52	19	68
Purple Finch									(2)		
House Finch											
White-winged Crossbill									14		3
Common Redpoll	40		38	93	6	172	123	56	126	30	160
Hoary Redpoll				1		1	1			4	
Pine Siskin											2
Evening Grosbeak						145				(2)	
House Sparrow	200	16	32	579	2	5		75	30	24	190
Total Birds Count Day	651	280	311	1008	55	789	259	533	412	189	671
Extra Birds Count Period	4				7	9	100	3	2	3	
Total Species Count Day	17	11	17	15	6	21	11	10	17	14	19
Extra Species Count Period	3				3	4	1	3	1	2	

Table 3-5 Species found in 7 or more localities () = seen during count period

Aves	Kindersley North 26 Dec 2006	Kinloch 14 Dec 2006	Kutawagan 27 Dec 2006	Kyle 28 Dec 2006	LaRonge 27 Dec 2006	Last Mountain Lake 29 Dec 2006	Leader North 30 Dec 2006	Love-Torch River 26 Dec 2006	Luseland 26 Dec 2006	MacNutt 27 Dec 2006	Mayview 2 Jan 2007
Canada Goose											
Mallard											
Common Goldeneye					2						
Gray Partridge	106	(7)	9	309		22	38	20	27		
Ring-necked Pheasant							30				
Ruffed Grouse		4						6		6	
Spruce Grouse					1						
Sharp-tailed Grouse		1	32	13		7	1		34	1	4
Bald Eagle							2		(1)	(1)	
Sharp-shinned Hawk											
Northern Goshawk						(1)		1			
Golden Eagle				(2)							
Merlin				1					(1)		
Prairie Falcon									1		
Rock Pigeon	33	4	29	124		10	6	53	25		
Great Horned Owl	3	(1)	3	14	(1)	5	1		1	(2)	
Snowy Owl	(2)			2		2			3		
Downy Woodpecker		2	2	1	3		2	17	1	2	
Hairy Woodpecker		5	2	2	2	1		15	2	6	3
Black-backed Woodpecker								(1)		(1)	
Northern Flicker							1				
Pileated Woodpecker		(1)					1			(1)	
Northern Shrike								1	(1)	(1)	
Gray Jay		7			8			5			2
Blue Jay		17		(1)	2		2	19	9	20	6
Black-billed Magpie	22	19	49	82		24	18	68	69	19	
Common Raven		32	11		683			128	2	62	
Horned Lark	2			47		2			4		
Black-capped Chickadee		46	4	7	32	1	2	96	12	36	8
Boreal Chickadee		(2)			8			(1)			4
Red-breasted Nuthatch								2			
White-breasted Nuthatch		3							(1)		
Brown Creeper											
American Robin											
European Starling			43	6	5	4			1	2	
Bohemian Waxwing	(3)			50			20	(70)	(14)		
Dark-eyed Junco									1		
Snow Bunting	(50)	65	101	623		149		846	(110)		
Pine Grosbeak		69		1	55			121	30	15	10
Purple Finch											5
House Finch									8		
White-winged Crossbill											
Common Redpoll	92	57	199	11	37	106		318	215	10	
Hoary Redpoll		(3)	4		1	4		8			
Pine Siskin										6	
Evening Grosbeak		17			(1)			134			
House Sparrow	150		312	762		265	6	79	65		
Total Birds Count Day	410	348	805	2058	839	603	132	1937	510	186	42
Extra Birds Count Period	55	16		4	2	1		72	129	6	
Total Species Count Day	9	15	18	18	13	15	15	19	19	13	8
Extra Species Count Period	3	7		3	2	1		3	7	5	

Table 3-6 Species found in 7 or more localities () = seen during count period

Aves	Meadow Lake 26 Dec 2006	Moose Jaw 15 Dec 2006	Moose Mountain 2 Jan 2007	Morse 2 Jan 2007	Nipawin 30 Dec 2006	Nisbet Forest NW 23 Dec 2006	Nisbet Forest West 26 Dec 2006	Pierce Lake 31 Dec 2006	Pike Lake 2 Jan 2007	Prince Albert 17 Dec 2006	Prince Albert NP 21 Dec 2006
Canada Goose											
Mallard								15			
Common Goldeneye					1						
Gray Partridge		32		491	32				8	7	
Ring-necked Pheasant		6									
Ruffed Grouse					4		1	9	2	10	
Spruce Grouse								3			
Sharp-tailed Grouse	7	11	34	122	6				44		
Bald Eagle					1			1	2		
Sharp-shinned Hawk		1							1		
Northern Goshawk									2		1
Golden Eagle				1							
Merlin		(1)								2	
Prairie Falcon				1							
Rock Pigeon	54	79	18	77	35		(10)		114	208	
Great Horned Owl				17	2				1		
Snowy Owl		2		5							
Downy Woodpecker		13	1	3	7	4	3		19	6	3
Hairy Woodpecker			6	1	4	4	4		20	3	
Black-backed Woodpecker								1			
Northern Flicker		2							1		
Pileated Woodpecker					1				3	1	2
Northern Shrike					1				1	4	
Gray Jay	1					2					11
Blue Jay	2	6	23	1	16	4	9	5	32	4	
Black-billed Magpie	6	30	36	13	42		(1)	12	171	86	7
Common Raven	47		25		211	2	(1)	19	33	145	18
Horned Lark				170	(4)						
Black-capped Chickadee	2	37	32		28	34	28	14	399	100	18
Boreal Chickadee					1	(1)		3		4	9
Red-breasted Nuthatch		18			5					2	
White-breasted Nuthatch	1	5	1		1	4	3		28	3	
Brown Creeper									2		
American Robin									4		
European Starling		14									
Bohemian Waxwing				2	30		(1)		200	530	
Dark-eyed Junco		26									
Snow Bunting			621	1030	(30)	(40)		2	53		
Pine Grosbeak	9				39	6	25	11	235	50	
Purple Finch											
House Finch		32		1							
White-winged Crossbill									1		
Common Redpoll	33	24	36	336	280	12	110	3	337	319	5
Hoary Redpoll				1	1		8		1		
Pine Siskin		13		(8)						4	
Evening Grosbeak	31				150	2	5			5	
House Sparrow	8	432	14	532	126				524	105	
Total Birds Count Day	201	795	847	2805	1026	74	196	100	2252	1599	79
Extra Birds Count Period		1		10	34	41	14				
Total Species Count Day	12	21	12	19	25	10	10	13	31	22	10
Extra Species Count Period		1		2	2	2	5				

Table 3-7 Species found in 7 or more localities () = seen during count period

Aves	Qu'Appelle Dam 17 Dec 2006	Raymore 26 Dec 2006	Regina 26 Dec 2006	Rouleau 1 Jan 2007	Round Lake 20 Dec 2006	Saltcoats 29 Dec 2006	Sask. Landing PP 31 Dec 2006	Sask. R. Forks 19 Dec 2006	Saskatoon 26 Dec 2006	Senate 1 Jan 2007
Canada Goose	1		483						286	
Mallard	1140		64		8		1		177	
Common Goldeneye	16								314	
Gray Partridge	78		219	25		35	52	9	68	12
Ring-necked Pheasant			2				1		2	
Ruffed Grouse		1			2	8				
Spruce Grouse										
Sharp-tailed Grouse	52	1	(1)	27	3	21	57	8	18	5
Bald Eagle	3				1				1	
Sharp-shinned Hawk			(1)						1	
Northern Goshawk	1									
Golden Eagle	2				1		2			1
Merlin		1	(1)						8	
Prairie Falcon	1						(1)			
Rock Pigeon	35	12	681	24	1	45	10		2032	80
Great Horned Owl	4	1	9	10		1	4	1	4	1
Snowy Owl			12	9			2		1	(1)
Downy Woodpecker	2	3	23		10	8	3	3	40	
Hairy Woodpecker	3	4	4	(1)	4	10		2	33	
Black-backed Woodpecker										
Northern Flicker	1		9						20	
Pileated Woodpecker						(1)		1		
Northern Shrike		1							2	
Gray Jay										
Blue Jay	4		1		2	10		5	76	
Black-billed Magpie	85	34	47	6	21	17	43	15	597	1
Common Raven	9	18	2		14	34		15	54	
Horned Lark	30						2			22
Black-capped Chickadee	42	20	39		67	45	18	20	701	
Boreal Chickadee								4		
Red-breasted Nuthatch			41						105	
White-breasted Nuthatch			8		14	2			13	
Brown Creeper		1	6						2	
American Robin									4	
European Starling	3		88	7	10				45	
Bohemian Waxwing	39		22			71		22	4683	
Dark-eyed Junco			8						8	
Snow Bunting	93	50	1				100	30		1
Pine Grosbeak	27	5	13		46	14	14	37	150	
Purple Finch										
House Finch	30		40						628	
White-winged Crossbill		5	37		4			11	(1)	
Common Redpoll	319	206	167		152	124	36	57	1006	
Hoary Redpoll	6	2			2	5		1	19	
Pine Siskin			2						5	
Evening Grosbeak								17		
House Sparrow	329	275	891	195	38	69	262	10	2744	50
Total Birds Count Day	2358	640	2999	304	400	519	607	268	13905	173
Extra Birds Count Period			3	1		1	1		2	1
Total Species Count Day	30	18	39	9	19	17	16	19	42	9
Extra Species Count Period			3	1		1	1		2	1

Table 3-8 Species found in 7 or more localities () = seen during count period

Aves	Shamrock 31 Dec 2006	Skull Creek 27 Dec 2006	Snowden 30 Dec 2006	Somme 27 Dec 2006	Spalding 19 Dec 2006	Spinney Hill 14 Dec 2006	Squaw Rapids 1 Jan 2007	Stenen 1 Jan 2007	Swift Current 30 Dec 2006	Togo 4 Jan 2007
Canada Goose		2								
Mallard									56	
Common Goldeneye							93			
Gray Partridge	177	30		33		5	7		137	
Ring-necked Pheasant		2							12	
Ruffed Grouse			1	10	1		4			
Spruce Grouse							1			
Sharp-tailed Grouse	9	120	1	11		5			105	1
Bald Eagle		1		2			6			
Sharp-shinned Hawk										
Northern Goshawk			(1)			1				
Golden Eagle	1	1								
Merlin									1	
Prairie Falcon		1								
Rock Pigeon	22	15	7	11	6	4			195	4
Great Horned Owl	3	2		1					2	
Snowy Owl	3								(1)	
Downy Woodpecker		7	6	5	1	2	2	2	8	12
Hairy Woodpecker		2	6	4	1	2		2	1	14
Black-backed Woodpecker			1	1						
Northern Flicker									4	
Pileated Woodpecker				1			1			
Northern Shrike		2								
Gray Jay			6	6			1	2		
Blue Jay		7	30	33		5	10	4	1	69
Black-billed Magpie	25	39	67	43	9	38	24	4	97	17
Common Raven			142	57		11	26	50		180
Horned Lark	225	1500							104	
Black-capped Chickadee		50	111	68	26	17	12	15	3	160
Boreal Chickadee			7				2	2		
Red-breasted Nuthatch		2			1		2		24	
White-breasted Nuthatch				6						19
Brown Creeper									1	
American Robin										
European Starling				38						
Bohemian Waxwing									12	45
Dark-eyed Junco		6							3	1
Snow Bunting	455		336	109		96	14		100	220
Pine Grosbeak		6	175	95		4	13	14		114
Purple Finch									1	
House Finch					37				71	
White-winged Crossbill						4			33	
Common Redpoll		200	263	101	17	39	70	50	182	215
Hoary Redpoll				5			1		3	
Pine Siskin		10			30	5			100	
Evening Grosbeak			95	102			6	4		56
House Sparrow	740	100	59	119	12	257	10		1266	58
Total Birds Count Day	1660	2182	1313	863	141	495	315	149	2590	1187
Extra Birds Count Period			1						2	
Total Species Count Day	10	25	17	24	11	16	23	11	31	17
Extra Species Count Period			1						2	

Table 3-9 Species found in 7 or more localities () = seen during count period

Aves	Turtle Lake 5 Jan 2007	Turtleford 29 Dec 2006	Weyburn 16 Dec 2006	White Bear 26 Dec 2006	Whitewood 30 Dec 2006	Yorkton 21 Dec 2006	Totals Count Day	Extras Count Period	# of Counts Seen Count Day	# of Counts Seen Count Period
Canada Goose							5301		8	8
Mallard							6136	8	14	15
Common Goldeneye							648		12	12
Gray Partridge		13	97	54	9	2	3039	36	51	54
Ring-necked Pheasant			4	1			254		15	15
Ruffed Grouse		(3)			1		127	7	33	37
Spruce Grouse	3						20		7	7
Sharp-tailed Grouse		51	13	33	15		1464	2	63	65
Bald Eagle					(1)		57	5	15	20
Sharp-shinned Hawk				1			5	2	5	7
Northern Goshawk		1			(1)		12	4	11	15
Golden Eagle							16	4	12	14
Merlin			2		1		18	4	9	13
Prairie Falcon							8	2	7	9
Rock Pigeon		116	173	125	53	248	5911	43	67	69
Great Horned Owl	1	5			1		129	13	37	46
Snowy Owl		1	5	3			64	6	20	24
Downy Woodpecker	1	4	2		13	2	394	2	77	79
Hairy Woodpecker	2	5	1		14	4	322	3	70	73
Black-backed Woodpecker							5	3	5	8
Northern Flicker			1				45	1	12	13
Pileated Woodpecker	1						15	12	12	21
Northern Shrike							21	3	16	19
Gray Jay	2						110		25	25
Blue Jay	9	6			4	6	785	4	71	73
Black-billed Magpie	4	41	11	18	45	12	3574	1	85	86
Common Raven	6	32			45	41	3490	1	69	70
Horned Lark			1				2276	12	21	24
Black-capped Chickadee	13	63		6	153	41	4063		84	84
Boreal Chickadee	1						109	5	19	23
Red-breasted Nuthatch	1		8		1		275		28	28
White-breasted Nuthatch	2	(1)	3		3		184	3	36	39
Brown Creeper			1				16		9	9
American Robin							10	4	4	7
European Starling		(20)		100		10	598	31	25	28
Bohemian Waxwing		(40)	13		49	43	7601	348	34	41
Dark-eyed Junco	1		3		4		89	6	19	20
Snow Bunting		185	141		120	57	8143	680	54	61
Pine Grosbeak	14	42	2		(2)	16	2553	5	71	73
Purple Finch					3		21	3	5	7
House Finch			11		47	8	1060	5	17	18
White-winged Crossbill							123	1	12	13
Common Redpoll	10	299		182	212	76	12578		84	84
Hoary Redpoll		5			16		210	4	40	42
Pine Siskin					1	2	180	8	12	13
Evening Grosbeak							960	7	22	26
House Sparrow		83	384	448	643	380	19430		75	75
Total Birds Count Day	71	956	902	971	1455	949	93185			
Extra Birds Count Period		106			4			1428		
Total Species Count Day	16	19	24	11	25	17	98			
Extra Species Count Period		7			3			4		

Figure 1. Location of 2006 counts (numbers correspond to those in text under **Count areas and participants**).

Natural Vegetation Zones*

- A. Subarctic Woodland
- B. Northern Boreal Forest
- C. Southern Boreal Forest
- D. Aspen Parkland
- E. Mixed Prairie
- F. Dry Mixed Prairie
- G. Cypress Hills

*adapted from: Thorpe, J. 1999. Natural Vegetation. P. 133 in Atlas of Saskatchewan (K. Fung, ed). Univ. of Sask., Saskatoon.

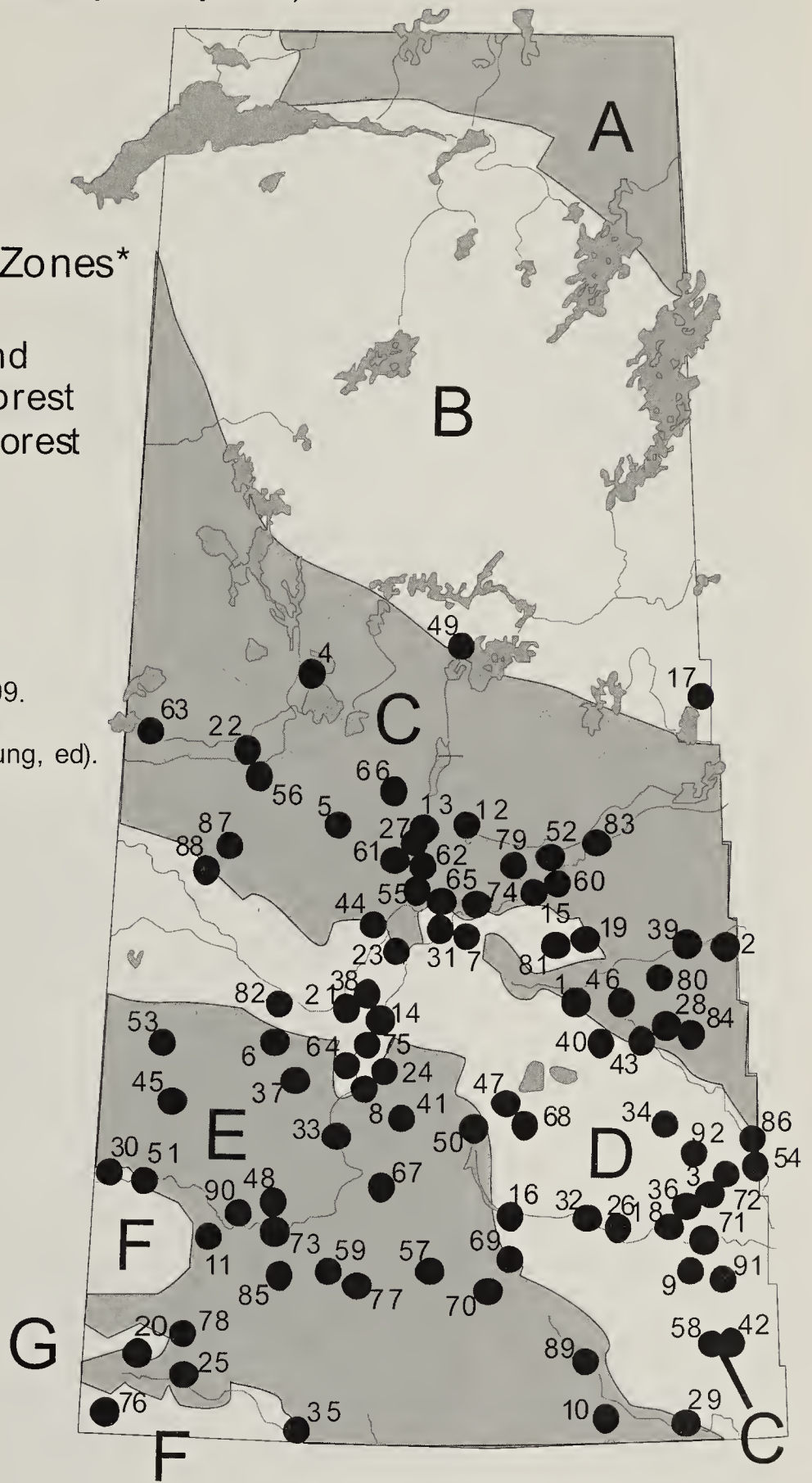


Table 4-1 Species found in fewer than 7 localities

Species	Locality and Number (* = Count Period)
Cackling Goose	Gardiner Dam (14)
Trumpeter Swan	Fort Qu'Appelle (1)
Gadwall	Swift Current (4)
Northern Pintail	Estevan (1)
Green-winged Teal	Estevan (1)
Canvasback	Fort Qu'Appelle (1*), Gardiner Dam (1), Swift Current (16)
Redhead	Gardiner Dam (3)
Ring-necked Duck	Estevan (2)
Greater Scaup	Gardiner Dam (1)
Lesser Scaup	Gardiner Dam (5), Qu'Appelle Dam (1)
Bufflehead	Estevan (3)
Common Merganser	Estevan (2), Gardiner Dam (115), Saskatoon (1), Squaw Rapids (6)
Willow Ptarmigan	Beauval (26), Creighton (35)
Wild Turkey	Broadview (6), Weyburn (5)
Common Loon	Saskatoon (1*)
Northern Harrier	Archerwill (1)
Cooper's Hawk	Eastend (1*), Saskatoon (1), Yorkton (1)
Red-tailed Hawk	Bromhead (1), Estevan (1*)
American Kestrel	Kyle (1*)
Gyrfalcon	Birch Hills (1*), Harris (1), Nipawin (1), Swift Current (1*), Turtleford (1)
Peregrine Falcon	Skull Creek (2)
American Coot	Estevan (8)
Glaucous Gull	Gardiner Dam (1)
Eurasian Collared-Dove	Estevan (27), Harris (4), Kyle (3), Moose Jaw (11), Swift Current (46), Weyburn (11)
Mourning Dove	Estevan (1), Estuary North (1), Kutawagan (1), Regina (1), Saskatoon (1), Squaw Rapids (2)
Northern Hawk Owl	Candle Lake (1), Nisbet Forest West (1*), Prince Albert (1), Squaw Rapids (2)
Great Gray Owl	Beauval (1*)
Long-eared Owl	Kutawagan (1), Morse (1)
Short-eared Owl	Kutawagan (1), Leader North (2), Morse (2*), Qu'Appelle Dam (1), Rouleau (1)
Belted Kingfisher	Cypress Hills PP (1)
Yellow-bellied Sapsucker	Estuary North (1)
American Three-toed Woodpecker	Candle Lake (3), Emma Lake (1*), Prince Albert NP (3), Somme (2)
American Crow	Biggar (2), Craven (1), Fort Qu'Appelle (1*), Regina (4), Saskatoon (9), Turtleford (1*)
Golden-crowned Kinglet	Gardiner Dam (2), Kenosee Lake (3), Pike Lake (2), Regina (12), Saskatoon (15)
Townsend's Solitaire	Regina (1)
Hermit Thrush	Regina (1)
Varied Thrush	Regina (1), Saskatoon (1)
Brown Thrasher	Good Spirit Lake (1)
Curve-billed Thrasher	Dalmeny (1)
Cedar Waxwing	Archerwill (6*), Regina (50), Saskatoon (12), Skull Creek (60), Turtleford (40*), Whitewood (1)
Spotted Towhee	Saskatoon (1)
American Tree Sparrow	Eastend (6*), Estuary North (1), Fort Qu'Appelle (1*), Gardiner Dam (1), Grasslands NP (1), Last Mountain Lake (1)
Song Sparrow	Eastend (1)

Table 4-2 Species found in fewer than 7 localities

Species	Locality and Number (* = Count Period)
White-throated Sparrow	Crooked River (1), Kindersley North (1), Pike Lake (1), Regina (2), Turtleford (3)
Harris's Sparrow	Broadview (1), Estevan (1), Kindersley North (1), Skull Creek (15),
Lapland Longspur	Bromhead (56), Ellisboro (60*), Weyburn (6)
Northern Cardinal	Fort Qu'Appelle (1*)
Red-winged Blackbird	Fort Qu'Appelle (1*), Qu'Appelle Dam (1), Whitewood (1)
Western Meadowlark	Brightwater Res. (1*), Moose Jaw (1)
Rusty Blackbird	Broadview (1*), Kenaston (1), Pike Lake (10), Regina (3)
Brewer's Blackbird	Endeavour (2), Togo (2)
Common Grackle	Hudson Bay (1*), Swift Current (1), Turtleford (1*), Weyburn (4)
Gray-crowned Rosy-Finch	Beauval (1), Hudson Bay (1*), Luseland (1*), MacNutt (1), Regina (1)
Red Crossbill	Fort Qu'Appelle (2*), Regina (3), Saskatoon (12), Swift Current (1)
American Goldfinch	Estevan (1), Fort Qu'Appelle (1*), Regina (1)

Table 5 Birds not identified to species

Category	Locality and Number (* = Count Period)
Hawk sp.	Kinloch (1*), Kutawagan (1), Nipawin (1)
Falcon sp.	Pike Lake (1)
Woodpecker sp.	Dalmeny (1), Duck Lake (2), Kutawagan (1), Pierce Lake (2), Prince Albert NP (2), Saskatoon (5)
Blackbird sp.	Craven (3), Kinloch (1*)



*Long-eared Owl
photographed on
the Morse count, 2
January 2007
Randy McCulloch*

Table 6. New (in bold and italics), and tying, high counts for individual species in 2006. Count period results are in brackets.

LOCATION	2006 COUNT	SPECIES	PREVIOUS HIGH	LOCATION, YEAR
<i>Swift Current</i>	4	<i>Gadwall</i>	3	<i>Coronach, 1994; Swift Current 2005</i>
<i>Swift Current</i>	16	<i>Canvasback</i>	4	<i>Regina, 1970; Douglas P.P.; Estevan, 2000</i>
<i>Creighton</i>	35	<i>Willow Ptarmigan</i>	32	<i>Stony Rapids, 1971</i>
Saskatoon	(1)	Common Loon	1	N. to Grand Centre - Pierceland and Squaw Rapids
<i>Swift Current</i>	46	<i>Eurasian Collared-Dove</i>	30	<i>Moose Jaw, 2005</i>
<i>La Ronge</i>	683	<i>Common Raven</i>	460	<i>Love-Torch River, 2005</i>
Regina	1	Hermit Thrush	1	MacDowall 1997; Estevan, 2003
Good Spirit Lake	1	Brown Thrasher	1	Saskatoon, 1960; Regina, 1968; Snowden, 1999; Ft. Qu'Appelle, 2005
<i>Dalmeny</i>	1	<i>Curve-billed Thrasher</i>	New	
Saskatoon	1	Spotted Towhee	1	North to Turtle Lake and Saskatoon



Willow Ptarmigan on the Creighton count

Brenda and Harvey Schmidt

Table 7. Population changes in numbers of selected species in 2006* compared to 2005 and the average for 5 years (2001-2005), based on the number of birds per party hour. A minus sign indicates a decrease from previous years.

Species	% change from 2005	% change from 2001-2005		% change from 2005	% change from 2001-2005
Canada Goose	-84	-81	Black-billed Magpie	-13	-30
Mallard	-83	-79	American Crow	-60	-34
Common Goldeneye	11	-14	Common Raven	1	10
Gray Partridge	97	74	Horned Lark	-11	16
Ring-necked Pheasant	89	32	Black-capped Chickadee	16	-18
Ruffed Grouse	77	4	Boreal Chickadee	-44	-36
Sharp-tailed Grouse	51	-17	Red-breasted Nuthatch	7	-56
Bald Eagle	-10	-43	White-breasted Nuthatch	16	-27
Northern Goshawk	-54	-42	Brown Creeper	-30	-42
Rough-legged Hawk	-100	-100	Golden-crowned Kinglet	-45	-39
Golden Eagle	-57	-58	American Robin	-47	-95
Merlin	-21	-2	European Starling	25	50
Prairie Falcon	23	-23	Bohemian Waxwing	-29	-2
Rock Pigeon	-12	-30	Cedar Waxwing	100	-75
Great Horned Owl	-13	5	American Tree Sparrow	-97	-95
Snowy Owl	-12	-17	Dark-eyed Junco	38	-73
Great Gray Owl	-100	-100	Lapland Longspur	-83	-95
Short-eared Owl	-91	-75	Snow Bunting	-50	-62
Downy Woodpecker	29	-5	Pine Grosbeak	1436	24
Hairy Woodpecker	9	-17	Purple Finch	52	-85
American 3-toed Woodpecker	-38	-37	House Finch	-4	-13
Black-backed Woodpecker	-28	-60	White-winged Crossbill	936	-70
Northern Flicker	26	-12	Common Redpoll	18861	8
Pileated Woodpecker	-37	-64	Hoary Redpoll		106
Northern Shrike	33	18	Pine Siskin	250	-48
Gray Jay	4	-36	Evening Grosbeak	-13	-48
Blue Jay	49	19	House Sparrow	-8	-30

*As tremendous changes can occur in small sample sizes only those species recorded on an annual average of six or more counts are included.

JANUARY INITIATION OF SUBURBAN GREAT HORNED OWL NESTS IN MANITOBA

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In 2006, two Great Horned Owl pairs began nesting in suburban areas of Winnipeg, Manitoba in mid-January, approximately five to six weeks earlier than any previously recorded breeding date in that province.⁵ Comparison with rural Great Horned Owl nests nearby suggests that the urban heat island phenomenon, in combination with above average January temperatures, may have triggered these extremely early nesting efforts.

The first of these two nests was on the edge of Wildwood Golf Course, a suburban golf course near the Red River (Figures 1 and 2). Two chicks fledged. The older left the nest on the

evening of March 30 and flew from the nest tree on March 31 (Figures 3, and 4 & 5 on the inside front cover). The younger chick left the nest on April 2 but remained in the nest tree until April 8. Based on the average incubation period of 33 days and the average period in nest of 42 days,⁷ I estimate the date of clutch initiation to be January 15. The adult male apparently died shortly before the young fledged (D. Swayze, pers. comm.).

The second nest was located on Harris Boulevard, a suburban street along the edge of a golf course near the Assiniboine River. This is the only pair discussed in this article that nested

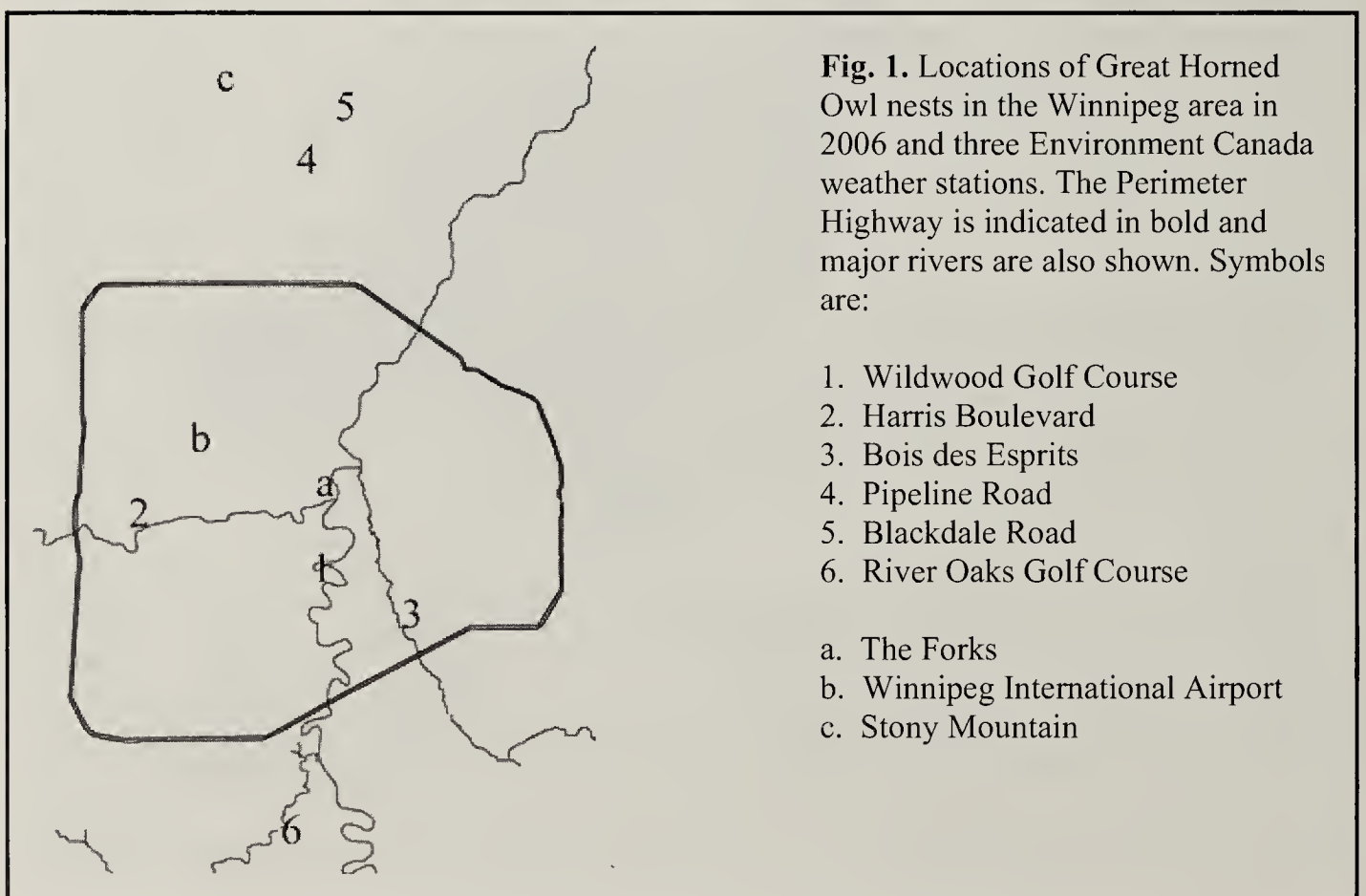


Fig. 1. Locations of Great Horned Owl nests in the Winnipeg area in 2006 and three Environment Canada weather stations. The Perimeter Highway is indicated in bold and major rivers are also shown. Symbols are:

1. Wildwood Golf Course
 2. Harris Boulevard
 3. Bois des Esprits
 4. Pipeline Road
 5. Blackdale Road
 6. River Oaks Golf Course
- a. The Forks
b. Winnipeg International Airport
c. Stony Mountain



Figure 2. Adult bringing eastern cottontail to young in the nest at Wildwood Golf Course on March 24, 2006.

in a conifer. Two chicks fledged in the second week of April. I estimate clutch initiation for this pair to be January 23, which is consistent with the observations of local residents.

A third seemingly early nest was located in the Bois des Esprits, a patch of riparian forest on the Seine River near a new suburban housing development. The female was observed sitting on the nest from February 21 to March 21, with the male in attendance nearby; however, the owls were not seen near the nest in early April and no further

information could be gleaned. Other Great Horned Owl nests in rural areas outside Winnipeg exhibited more typical phenology, producing fledged young in late May or early June, indicating laying in early or mid-March. None of 24 nests located in prairie and aspen parkland habitat in southwestern Manitoba during late April and early May of 2006 appeared early (K. De Smet, pers comm.). The locations and dates of nests in and near Winnipeg are summarized in Table 1. Locations are illustrated in Figure 1. All these nests produced two young,

except the Bois des Esprits nest for which the reproductive output is not known.

January 2006 was the warmest January ever recorded in Winnipeg (recording began in 1873) and in 14 other locations in Manitoba (D. Marciski, pers. comm.). The average temperature in Winnipeg in January 2006 was -7.4°C , which is more than 10°C warmer than the long-term average of -17.8°C , and more than 3°C warmer than the highest previously recorded January average of -10.6°C set in 1944.³ In 2006, temperatures were consistently well above normal throughout January, with only one day between December 21 and January 31 below normal. Minimum temperatures were especially high throughout the month, falling below -20°C on only three days of the month, and falling below the long-term average minimum temperature of -22.8°C on only one day of the month (January 22, minimum of -32.9°C).³ The maximum temperature was above -5°C on 24 days of the month.³

Exceptionally warm January temperatures were likely influential in the case of these early nests. Although the small sample size and the absence of highly localized weather data preclude statistical analysis, comparisons of fledging dates and average temperatures in suburban and rural areas point to the urban heat island (in combination with the unusually warm January) as an important factor in producing the differences noted in clutch initiation. To further investigate this possibility, I used the data from the 273 nest cards from Manitoba for Great Horned Owl in the Prairie Nest Record File to calculate clutch initiation dates. Egg dates were taken to indicate clutch initiation, (even though the eggs may have been laid previously), unless

fledging dates provided a more accurate estimate. Records of “well-incubated” eggs, sitting owls without other data, and larger downy young were not included in any calculations, as estimating the onset of laying would have been too difficult. The dates I calculated therefore represent the latest possible clutch initiation, a conservative estimate rather than a precise measurement. Details of the nests with the 10 earliest clutch initiation dates are provided in Table 2.

There are 95 nest cards from Manitoba for which an estimate of clutch initiation is possible. Based on these, the average latest clutch initiation date is April 1 ± 2.2 days (standard error of the mean). The average of the nine records from Winnipeg is March 19 ± 9.4 days. The actual average clutch initiation dates are likely to be earlier for the reasons discussed above. There are six records of clutch initiation in February in the nest record file (not including the 2006 nests described above), the earliest being February 18. The fact that four of these six (67%) records are from Winnipeg, when only nine of the 95 (9%) nest records are from that city, further suggests the importance of the urban heat island effect. Of the six February clutch initiation records, four were in years with above average February temperatures and data for one year are lacking. The two earliest records were in years that were approximately 7°C above average. This also suggests temperature acts as a trigger for egg-laying.

I also compared data on winter snowfall and snow thickness from Environment Canada weather stations for the three early nests in 2006 and the 10 earliest records from the Prairie Nest Record File, summarized in Table 3.

Nine of the 10 nests for which there were data on total winter snowfall were at locations, and in years, with 3.6 – 40.8 cm less than average snowfall. The only early nest with above average snowfall was in Assiniboine Park, Winnipeg in 1987 (3 cm above average). The amount of snow that remains on the ground probably has more biological significance to the owls and their prey than snowfall per se and, for five of the six nests where data were available, the snow on the ground on the last day of February was 11 – 25 cm less than average. The 1987 Winnipeg nest again provides the only exception. Unfortunately, more useful data, such as average snow thickness prior to clutch initiation, were not obtainable. These data suggest that snow thickness, which may be correlated

with temperature, may also be a factor in determining nesting phenology. Prey availability, another potentially influential factor, could not be evaluated.

The phenomenon of early nesting by Great Horned Owls in response to warm winter temperatures has been reported from elsewhere in North America, e.g. New York and Wyoming.^{2,9} Great Horned Owls initiated a clutch on approximately December 22, 2001 at an international airport in Montana.⁶ Above average November and December temperatures and artificial lighting at the airport may have been factors in this early nesting.⁶ None of the early nests in Winnipeg, 2006 were in well-lit areas, though there were a few street lamps nearby in each case.



Figure 3. “Branching” young at Wildwood Golf Course on March 31, 2006.

Table 1. Location and dates of Great Horned Owls nests in 2006 from Winnipeg and surrounding area.

Location	Distance to City Centre - Habitat	Mean T Jan 2006	Long-term Jan Mean T	Laying	Branching	Fledging
Wildwood GC	3.8km - sub GC	F: -6.3	N/A	Jan 15	03/30, 04/02	03/31, 04/08
Harris Blvd	10.3km - sub GC	A: -7.4	-17.8	Jan 23	04/08, 04/10	04/08, 04/14
Bois des Esprits	9.9km - sub rip	A: -7.4	-17.8	< Feb 21	Unknown	Unknown
Pipeline Rd	16.5km - rural ag	S: -7.8	-18.0	Mar 8	05/20, 05/21	05/22, 05/24
Blackdale Rd	24.5km - rural ag	S: -7.8	-18.0	Mar 17	05/28, 05/29	05/31, 05/31
River Oaks GC	19.1km - rural GC	S: -7.8	-18.0	Mar 22	05/31, 06/01	06/05, 06/09

T = temperature in degrees Celsius from the nearest Environment Canada weather station.³ Where no nearby weather station was available, a station of a similar distance from the city center was selected. Weather stations are indicated under the Mean T Jan 2006 column as follows: F: The Forks; A: Winnipeg International Airport; and S: Stony Mountain. Laying dates are estimated from fledging dates as described in the text. Branching refers to the first day an owlet left the nest but remained perched in the nest tree, although some occasionally returned to the nest for brief periods. Fledging here refers to the date when the owlets left the nest tree for the first time. Other abbreviations: ag = agricultural, Blvd = boulevard, GC = golf course, rip = patch of riparian forest, sub = suburban.

Table 2. The 10 earliest records of egg laying by Great Horned Owl in Manitoba from the Prairie Nest Record File with mean February temperatures (°C) from the respective years.

Date	Observation	Mean T Feb	Long- term Feb Mean T	Diff	Location	Latest Clutch Initiation
1987 May 1	3 chicks; fledged May 4– 7	A: -6.5	-13.6	7.1	Wpg, Assiniboine P	Feb 18
1984 Mar 20	incubating; 1 fledged May 12	A: -6.8	-13.6	6.8	Wpg, King's P	Feb 26
1925 Feb 28	2 eggs	V: N/A	-12.2	N/A	near Hartney	Feb 28
1981 Feb 28	incubating	S: -10.0	-13.8	3.8	Birds Hill PP	Feb 28
1982 Feb 28	incubating	A: -14.5	-13.6	-0.9	Wpg, Fort Whyte	Feb 28
1983 Feb 28	incubating	A: -10.5	-13.6	3.1	Wpg, Fort Garry	Feb 28
1960 Apr 2	2 chicks	A: -13.9	-13.6	-0.3	Wpg, Assiniboine P	Mar 1
1978 Apr 6	chicks	O: -14.5	-13.4	-1.1	Woodworth	Mar 4
1927 Apr 9	2 chicks, 1 just hatched	Fr: -18.1	-15	-3.1	Teulon	Mar 7
1981 Mar 7	incubating; 2 chicks in April	V: -11.0	-12.2	1.2	Reston	Mar 7

Diff = the difference between the mean February temperature and the long-term average. Weather stations: A: Winnipeg International Airport; Fr: Fraserwood, O: Oakner, S: Stony Mountain, and V: Viriden. Other abbreviations: P = Park, PP = Provincial Park, and Wpg = Winnipeg. The mean February temperature for Fraserwood in 1927 is an estimate.³

Table 3. Location and dates of the 13 earliest Great Horned Owls nests reported from Manitoba with data on winter snowfall (cm) and snow on ground (cm) on last day of February from the respective years.

Location and Year	Latest clutch initiation	Total winter snow	Mean winter snow	Diff snow-fall	Snow on ground	Mean snow on ground	Diff snow on ground
Wpg: Wildwood GC, 2006	Jan 15	F: 34.6	N/A	N/A	N/A	N/A	N/A
Wpg: Harris Blvd, 2006	Jan 23	A: 53.5	57.1	-3.6	N/A	19	N/A
Wpg: Bois des Esprits, 2006	< Feb 21	A: 53.5	57.1	-3.6	N/A	19	N/A
Wpg: Assiniboine P, 1987	Feb 18	A: 60.1	57.1	3	32	19	13
Wpg: King's P, 1984	Feb 26	A: 29.8	57.1	-27.3	2	19	-17
near Hartney, 1925	Feb 28	V: N/A	61.3	N/A	N/A	N/A	N/A
Birds Hill PP, 1981	Feb 28	S: 15.6	56.4	-40.8	N/A	N/A	N/A
Wpg: Fort Whyte, 1982	Feb 28	A: 52.5	57.1	-4.6	5	19	-14
Wpg: Fort Garry, 1983	Feb 28	A: 42.0	57.1	-15.1	6	19	-13
Wpg: Assiniboine P, 1960	Mar 1	A: 32.5	57.1	-24.6	8	19	-11
Woodworth, 1978	Mar 4	O: 36.3	68.8	-32.5	N/A	N/A	N/A
Teulon, 1927	Mar 7	Fr: N/A	65.2	N/A	N/A	N/A	N/A
Reston, 1981	Mar 7	V: 44.7	61.3	-16.6	0	25	-25

Total winter snow is the sum of the recorded snowfall for December, January, and February at the nearest Environment Canada weather station for the relevant winter. Mean winter snow is the long-term average snowfall for the same period since recording began. Diff snowfall is the difference between total winter snowfall for the given year and the long-term mean. Snow on ground is measured on the last day of February for the given year. Mean snow on ground is the long-term mean of snow on the ground on the last day of February. Diff snow on ground is the difference between the snow on ground for the given year and the long-term mean.³

The exceptionally early nests documented here provide anecdotal evidence for two hypotheses: 1) that temperature is one of the cues used by Great Horned Owls in timing their breeding effort, possibly overriding photoperiod under certain conditions, and 2) that Great Horned Owls and other owls in suburban environments may benefit from the urban heat island in terms of early nesting. There is some evidence for the former from the Barn Owl,^{1,8} and for the latter from the Eastern Screech-Owl.⁴

Acknowledgements

I would like to thank all those who reported observations of Great Horned Owls including Alfred Aug, Greg Buzza, Kevin and Alison Campbell, John Hays, Randy Mooi, Nick Devine, Robert Robinson, and Dennis Swayze. I am grateful to Dale Marciski, the Outreach Officer at the Meteorological Service of Environment Canada, for his assistance in gathering climate data. I also thank Ken De Smet, James R. Duncan, Stuart Houston, Karla Kinstler, Janis Klapecki, Nicola Koper, Rudolf Koes, Randy Mooi, Spencer G. Sealy, Peter Taylor and an anonymous reviewer for their thoughtful comments which improved an earlier draft of this manuscript.

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"When the ground is completely bare of snow and a few warm days have dried its surface— It is pleasant to compare the faint tender signs of the infant year just peeping forth with the stately beauty of the withered vegetation which has withstood the winter— the various thistles which have not yet sown their seeds— The graceful reeds and rushes, whose winter is more gay and stately than their summer—as if not till then was their beauty ripe."
Henry D. Thoreau, *Journal, Volume 1: 1837-1844*.p. 471.

STARLINGS BANDED ON WINTERING GROUNDS AND RECOVERED IN SASKATCHEWAN

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European Starlings were released in Central Park, New York City in 1890 by Eugene Schieffelin as part of an effort to introduce into the United States all the birds mentioned in Shakespeare's sonnets and plays. By 1950, starlings had expanded across the Canadian prairies and British Columbia, and to all but the coastal rim of the Pacific states. "Migratory behavior appeared soon after introduction."²

In 1960, Johnson A. Neff began banding starlings at Monmouth, Oregon and Caldwell, Idaho, when "starling depredations and nuisance problems have begun to pyramid in the West, especially in Oregon, Washington and Idaho."⁴ He mapped starling recoveries in the first year of banding and these included six recoveries of Idaho birds in western Saskatchewan.⁵ Neff's work was the forerunner of a more comprehensive, ten-year program of starling banding in fruit-growing states, particularly Oregon and California.

Although starling movements from the Great Lakes and Midwest regions of the United States have been analyzed by Dolbeer,³ starling movements into and out of Saskatchewan were unknown. A single vector plot that synopsized movements of the 22,467 starlings banded in the Pacific flyway through 1973 indicated that the major direction taken by starlings banded in California was only slightly east of

north, to the interior of British Columbia, with no indication that any came as far as Saskatchewan.¹

Although I have banded 73 nestling Starlings in 15 different years between 1966 and 2005, I have yet to receive a recovery or encounter, in spite of starling control programs that kill many individual birds in some fruit orchards in the western United States.

If one cannot learn starling routes from birds banded in Saskatchewan, why not map information from birds banded on the wintering grounds and recovered in Saskatchewan? The map in Figure 1 is based on printouts of all 52 Saskatchewan recoveries from banding in the United States and British Columbia between 1938 and 1977. All but two of these starlings had been banded in the United States between 1960 and 1970, the exceptions being one banded in North Dakota in 1938 and the last of the recovered birds, banded in British Columbia in 1977.

The following list gives the location of banding in *italics* and, in parentheses, the number of birds recovered in Saskatchewan, followed by the exact location where they were found. An asterisk indicates that the ten-minute block of latitude and longitude referred to is the one immediately adjacent—south (S), north (N), east (E) or west (W)—of the location listed. White

Bear S*, for example, refers to the ten-minute block of latitude and longitude south of the block occupied by White Bear village.

British Columbia (1, at Pierceland).

California (15, at Kenaston, White Bear S*, Bruno, Fairy Glen, Hague E*, Lajord, Cavell, Alsask twice, Simmie, Beatty, Duck Lake W*, Glidden, Avonlea, Revenue).

Colorado (3, at Welwyn, Belle Plaine W*, Griffin).

Idaho (8, at Biggar N*, Simmie, Luseland, Smiley, Druid, Tugaske, Mantario, and Eaton).

Nevada (4, at Crichton, Rabbit Lake N*, Bethune, Pilger).

North Dakota (3, at Tyvan, Heward N*, and Northgate).

Oregon (15, at Waseca, Lashburn, Saskatoon, Unity W*, Neidpath, Horsham, Birsay, Beechy, Cactus Lake W*, Shellbrook, Hatton W*, Shamrock, Lake Lenore, Goodsoil S*, and Biggar).

Utah (1, at Chaplin W*).

Washington (2, at Plenty and Northminster).

Of the 52 birds recovered in Saskatchewan, three were released alive and the rest were dead when found or died soon after: 15 were found dead; 14 shot; 3 were injured and died; 3 drowned; 3 killed by cat; 3 caught in trap and died; 2 caught in building, of which one was released; 2 caught by hand and released; and 1 each killed by weather, disease, electrocution, an unspecified bird predator, and by striking an object. Two were "band only." The oldest was five years.

Acknowledgments

I thank Louise Laurin in the Canadian bird banding office in Ottawa for the electronic printout of Saskatchewan

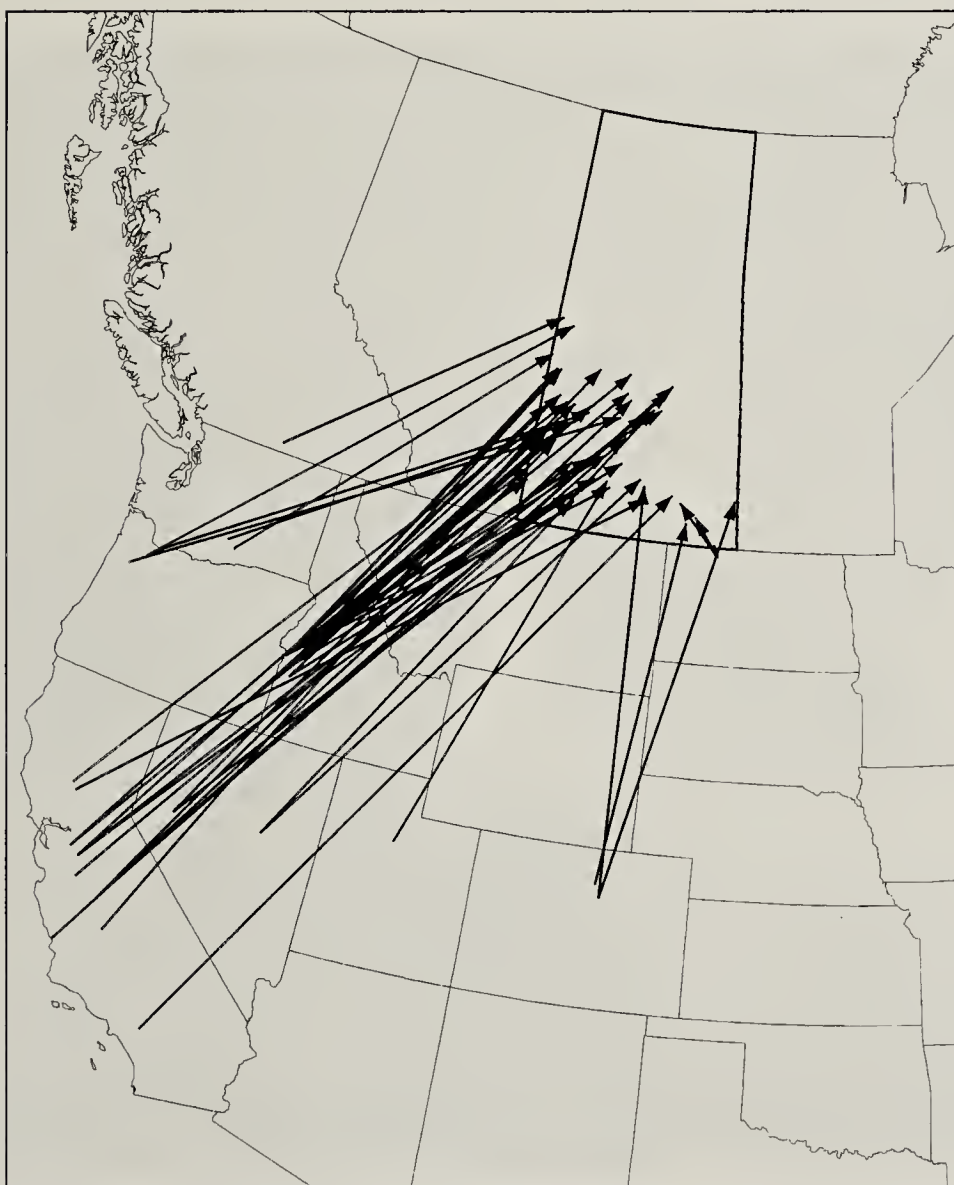


Figure 1. Starlings banded elsewhere and recovered in Saskatchewan
Map by Kathy M. Meeres

recoveries and Kathy M. Meeres for the map.

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Editor's Note: We believe that Eugene Schieffelin's name is spelled correctly in this article, as it agrees with the spelling of Schieffelin Avenue in New York City, which was named after him. Other spellings of this man's name that appear in published works and on the Internet are Schefflin, Schefflen and Scheiffelin. We would appreciate hearing from anyone who has additional information about this.



Ground Squirrel

Randy McCulloch

DIFFERENCES IN FORAGING AND VIGILANCE BETWEEN JUVENILE AND PARENT SANDHILL CRANES DURING FALL MIGRATION

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Introduction

Prey organisms face a trade-off between maximizing food intake, while having to watch for predators.^{2,7,11} If an organism focuses too much on one aspect of this trade off then its chances of either starving or being depredated are increased. This trade off appears to be most critical for juveniles. In many bird species, juveniles tend to have poorer foraging ability than adults.⁴ This leaves juveniles at a disadvantage, because they must spend more time foraging than adults and less time being vigilant to avoid predators, ultimately increasing their chance of being depredated.

Some species remain in a family group to help counter this disadvantage. It is thought many geese and crane species, including Sandhill Cranes, remain in family groups for this reason.^{3,5} In the family group, juveniles are able to spend more time foraging while their own vigilance time can be decreased. The length of time the family group remains together varies among species, but is terminated once the cost to individuals, either adult or juvenile, outweighs the benefits.¹⁰

Sandhill Cranes are a migratory species that nests mainly in boreal and arctic Canada and Alaska. The cranes winter in the southern United States and Mexico. The Last Mountain Lake

National Wildlife Area and Migratory Bird Sanctuary in Saskatchewan, is a major migratory stopover point for this species. Sandhill Cranes have a clutch size of one or two eggs, therefore family groups consist of three to four individuals. Once cranes leave the breeding ground, the young appear to have flying abilities equivalent to those of adults.¹⁰ The family group migrates together in fall and remains in a group up until spring migration.⁹ Human hunters are the primary predator faced by Sandhill Cranes during fall migration.

The purpose of my study was to compare Sandhill Crane parent and juvenile foraging and vigilance times at a fall migration stopover point. If young cranes are dependent on adults for protection while foraging at this point in their migration, I predicted that the vigilance times for juveniles would be lower than for their parents. Another purpose of this study was to determine whether distance of a family group from the flock influenced the vigilance and foraging times of juveniles and adults in the family group differently. I predicted that for adults, vigilance time should increase as the family group gets farther from the flock. If the vigilance times differ between adult and juveniles significantly, I predicted that distance would not affect the juveniles' vigilance.

Methods

From 28 - 31 August 2006, I observed Sandhill Cranes as they foraged in a barley lure crop approximately 1 km east of the Last Mountain Lake Migratory Bird Sanctuary (51° 23.780 N, 105° 09.723 W). The field was approximately 4 km² subdivided by five rows of Caragana (*Caragana arborescens*) shrubs that ran east to west. Because of the obstruction created by the shrubs, I changed my observation point daily so that I could view cranes on all portions of the field. Observations were made daily between 0900h and 1100h, and 1800h and 1930h. I used a 25 – 45 x 60 mm Nikon spotting scope and was usually able to get within 400 m of the flock to make observations.

Total flock size varied from approximately 1,500 to 3,000 individuals during the study period. Approximately 5 – 10% of the birds were juveniles. Adults and juveniles were differentiated on the basis of plumage.⁶ Adult Sandhill Cranes have a distinct red cap that extends from the bill to the back of the head, as well as a white cheek patch. Juveniles lack both of these characteristics and have a uniformly grey head. I identified family groups after watching which adult birds moved with which juvenile(s), a process which took between 1 to 20 min. per juvenile. I selected family groups from different areas in the field to prevent counting a particular group twice. Once selected, a family group was assigned a designation based on its distance to the next group: In flock (0 m from flock), Near flock (<10 m from flock), and Distant (>10 m from flock). A flock was defined as 10+ birds with <2 m between adjacent birds.

One juvenile crane from each family group was observed for 2 min as it foraged. I assumed that when birds were at the lure crop their main focus

was foraging. I recorded both the number of head lifts (head raised above shoulder level) and the amount of time the bird's head remained lifted. On a small number of occasions, birds lifted their heads and began preening without looking around. I did not count preening as a head lift. Immediately after observing the juvenile, I recorded the same data for one of the adults of the family group for 2 minutes. I terminated observations if all cranes in the immediate area or entire field lifted their heads after a bird gave a warning call. This usually occurred when vehicles passed along the road adjacent to the field. Overall, I sampled 26 pairs of juveniles and adults during the study period.

To compare the number of head lifts and the length of time spent watching by juveniles versus parents I used a paired t-test.¹² This controlled for the distance variable from other birds. I then used a one factor ANOVA to assess the difference between the number of head lifts and time spent with head lifted for each of the three categories of distance of the family group from the flock. For both tests I employed an alpha value of 0.05.

Results

Of the 26 pairs of juvenile and adult birds I observed, I found that adults lifted their heads significantly more often ($t=4.3$, $df=25$, $p < 0.01$) than juveniles (Fig. 1). The number of head lifts for juveniles ranged from 0 - 4, while adults made 1 - 6 head lifts during the 2 min period. Adult cranes also kept their heads up for significantly longer than juveniles ($t=1999.3$, $df=25$, $p < 0.01$; Fig. 2). The range for the total time juvenile cranes kept their heads raised during the two minutes, was 0 to 28 sec, while for adults the total time ranged from 1 to 44 sec.

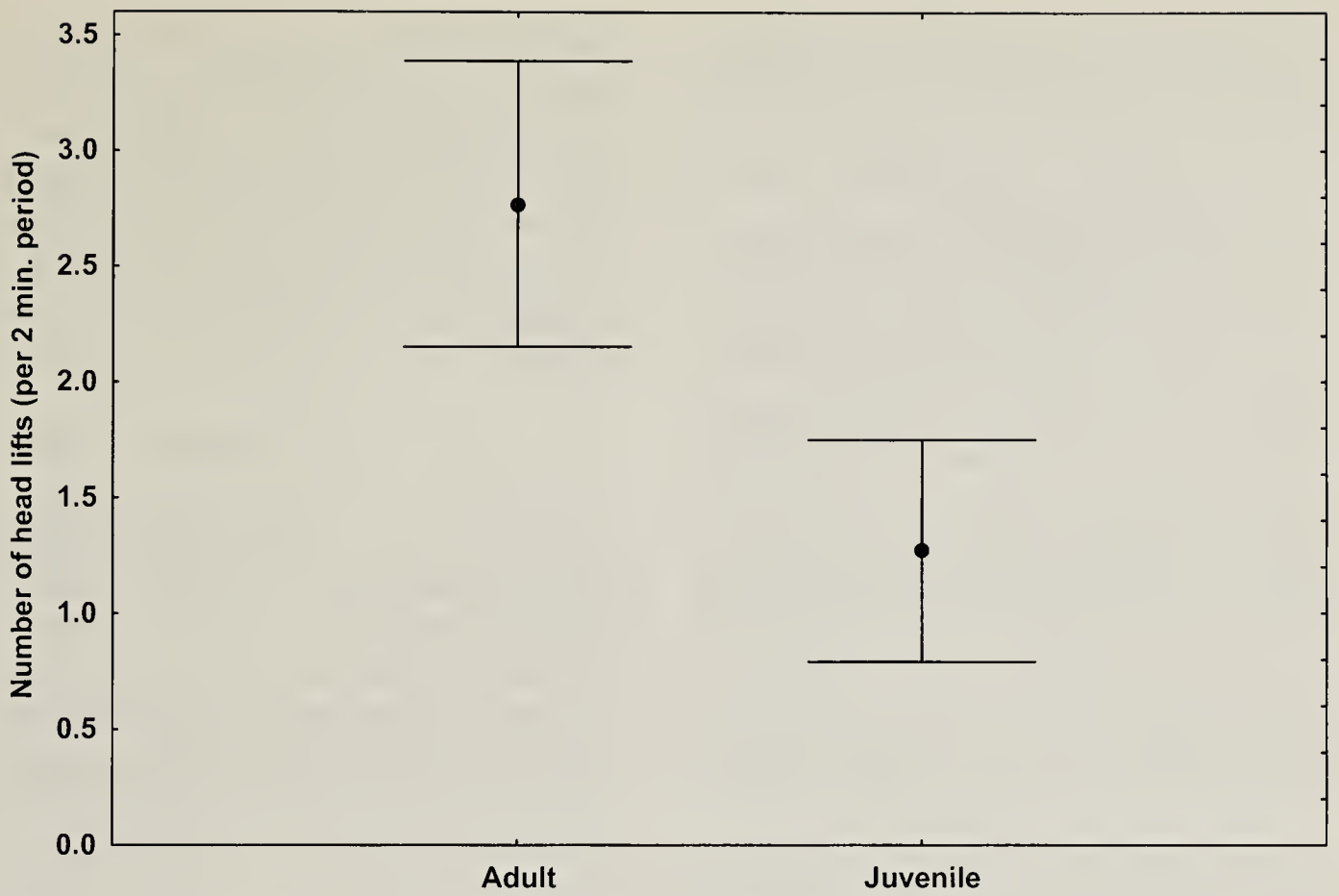


Figure 1. Mean number of head lifts between adult and juvenile Sandhill Cranes during 2 min observation periods. 95% confidence interval shown.

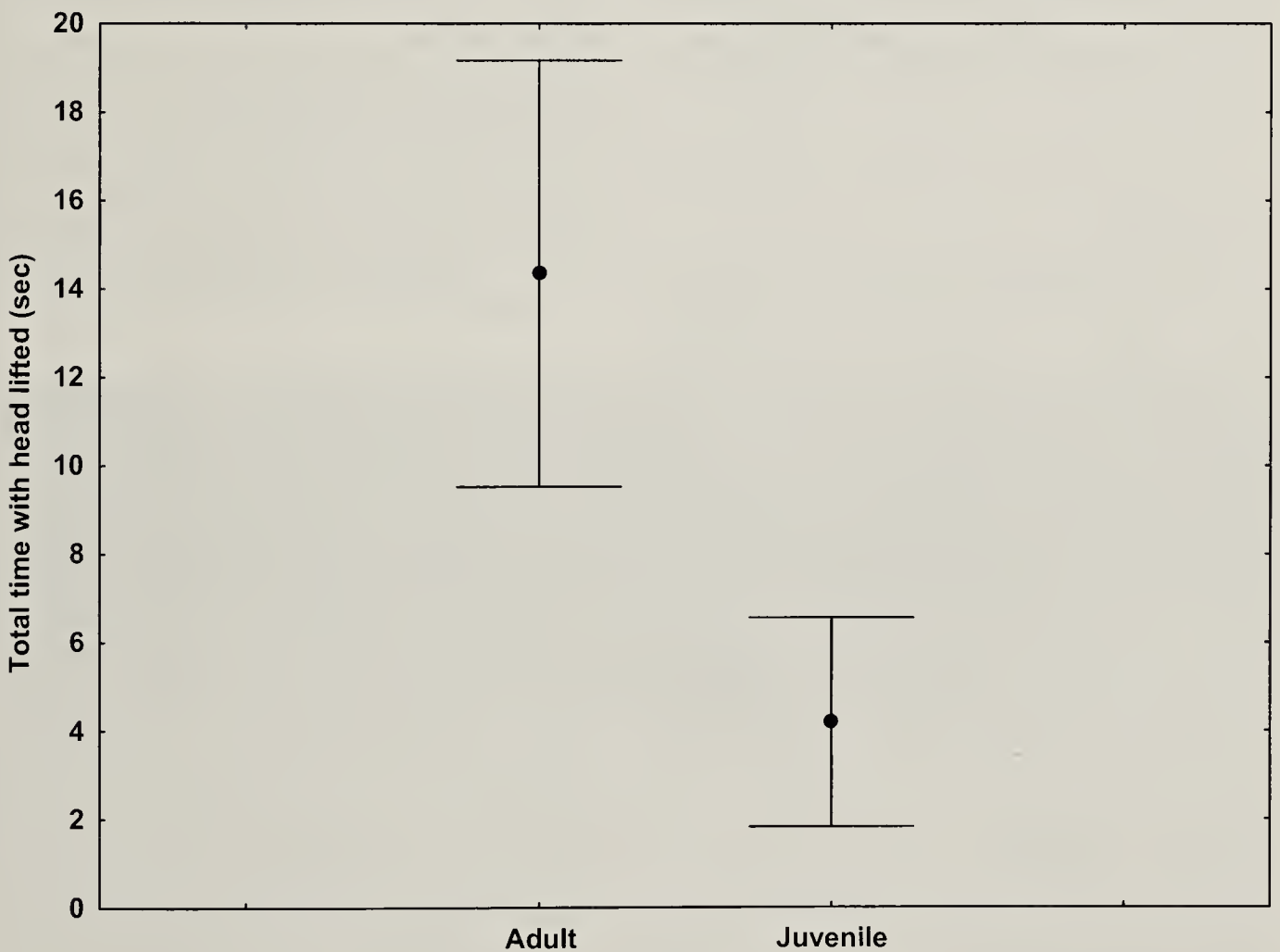


Figure 2. Mean total time spent with head raised during 2 min observation periods between the adult and juvenile Sandhill Cranes. 95% confidence interval shown.

There was no statistically significant difference in the number of head lifts made by juveniles at the three relative distances from a flock ($F=3.4$, $df=2$, $p=0.82$). The average number of head lifts for juveniles during the two minute period at varying distances from the flock—In flock, Near flock and Distant—were 1.2, 1.5, and 1.1 respectively. There was also no statistically significant effect of distance on the total time juveniles spent with their heads lifted ($F=3.44$, $df=2$, $p=0.3$). Average total amount of time spent with head lifted for juveniles In flock, Near flock and Distant, were 4.4, 7.2, and 2.3 seconds respectively. For adult cranes, neither the number of head lifts ($F=3.44$, $df=2$, $p=0.81$), nor the total time with head lifted ($F=3.44$, $df=2$, $p=0.37$) differed significantly as a function of distance from the flock. The average number of head lifts for adult cranes In flock, Near flock and Distant, were 2.7, 2.5, 3.0, respectively, while total time spent with head lifted at these same distances was 10.0, 14.5, and 18.1 seconds, respectively.

Discussion

I found that adult Sandhill Cranes spent more time being vigilant (with their heads raised, presumably watching for predators) than did juvenile cranes; this difference was statistically significant. My data support the hypothesis that young cranes rely on vigilance by adults in a family group during this point in fall migration.

A family group has many potential benefits for juvenile cranes. Firstly, the family group system allows the juveniles to allocate more of their time to foraging, instead of watching for predators. This extra foraging time allows the juveniles to compensate for the discrepancy of foraging abilities between themselves and their parents. Family groups also protect juveniles

from agonistic encounters from more dominant or aggressive cranes, which again allows for more feeding time.⁹ Another important benefit of the family group is simply that there are more eyes watching for predators, which will increase the juvenile's chance of survival.

In another study, over the winter season, vigilance time of juvenile Common Cranes (*Grus grus*, a close relative of Sandhills) increased as their foraging abilities improved.¹ The juveniles' vigilance times were close to equal to those of their parents, when the family group broke up. I would expect this trend to be similar in Sandhill Cranes.

There appears to be no obvious cost to adult Sandhill Cranes in being in a family group during the non-breeding season.¹⁰ Adult Common Cranes were able to spend significantly less time feeding than juveniles birds, while still having a higher net intake of food than the juveniles.¹ This difference is the key reason why adult cranes, both Sandhill and Common, are able to maintain higher vigilance than juveniles and why the family group structure is beneficial.

I found no change in vigilance by either juvenile or adult birds at varying distances from the flock. The distribution of birds was not uniform over the field, which could have affected how the cranes perceived their position in the flock even though, from my observation point, they fell into certain distance categories. A possible limitation of my study was that three different distance variables assigned to the pairs of birds was too small. The sample sizes for this test were also relatively small.

Conclusion

The interactions between juvenile

and adult Sandhill Cranes in family groups appear to be advantageous. This strategy allows the juveniles to forage maximally while relying on adults to detect predators. The family group system appears to be a good strategy to cope with the difficult trade-off between foraging and vigilance that is forced on juveniles because of their poorer foraging ability.

Acknowledgments

Thank you to Mark Brigham and Kristen Bondo for their comments and suggestions during the early stages of this study and on this manuscript. I am appreciative of the helpful comments on the manuscript from Rick Espie, Tracy Fisher, C. Stuart Houston, and Trevor Herriot. Rick Espie also helped in the creation the graphs.

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Sandhill Crane adults and juvenile (middle)

Peter Hardie

MAMMALS

34th ANNUAL SASKATCHEWAN CHRISTMAS MAMMAL COUNT—2006

ALAN R. SMITH, 115 Perimeter Road, Saskatoon, SK S7N 0X4.

Of the 92 Christmas Bird Counts received this winter, 85 were accompanied by a Christmas Mammal Count (CMC). This is the fewest since 1992 when 80 were conducted. The 32 species of mammals seen or heard on counts was about normal for the last decade, while the 4080 individuals is the second highest total since overall totals were first tabulated in 2000.

For the second consecutive year, the three most abundant mammals were ungulates. The White-tailed Deer was the most common, followed by the Mule Deer and Pronghorn; the American Red Squirrel took fourth place. As in the past few years the White-tailed Deer was also the most widespread mammal, being recorded on 69% of all counts. American Red Squirrels were found on 51% of counts, followed by Coyotes on 49%, and Mule Deer on 35%.

The increase of White-tailed Deer may be of special interest and perhaps concern. Roughly half of the mammals recorded on this year's count were White-tails. Their numbers were noticeably higher than last year, and the gap between their numbers and those of the Mule Deer has widened. Only time will tell if this trend continues and if there are detrimental effects on numbers of Mule Deer, hares and other browsers.

As with the birds, Saskatoon had the most species of mammals with 12 species seen or heard on count day.

Somme and Togo were close behind with 11 species each.

No new species were recorded. The few rarities included the tracks of Swift Fox at Senate, and tracks of Mountain Lion at MacNutt and Woodland Caribou at Creighton. Although neither mammals nor birds, the five Leopard Frogs seen in a spring on the Cypress Hills Provincial Park count are well worth mentioning.

High counts for all species recorded on the CMC have now been tabulated (Table 2). New high counts for this year included 400 White-tailed Deer and eight House Mice on the Skull Creek count, and eight Striped Skunks on the Raymore count.

It should be of interest, and a source of pride, to our readers that there appears to be only one other jurisdiction (province or state) in North America that conducts a CMC in conjunction with its Christmas Bird Count. The other jurisdiction is New Brunswick and they started after we did.

The importance of having a CMC cannot be overstated. It provides us with valuable information on the distribution, abundance and population trends of our mammals. Furthermore, it allows us to compare trends and interrelationships among mammal species, and between bird and mammal species.

Our goal (one which has already been accomplished with the bird count) is to have all the mammal count data tabulated. This would allow us to conduct the sorts of analyses mentioned above and present the same kinds of data summaries as is done for the CBC.

For information on participants, weather, coverage and location of Christmas Mammal Counts, see the CBC summary in this issue.

Explanation of entries in Table 1.

The number of mammals actually seen or heard on count day is treated separately from those recorded by other means and those recorded during count period (14 December to 5 January) but not on count day. Numbers of individuals seen or heard are given in Table 1 and are tallied in the first line of totals at the bottom of the table. The number of species they represent is given in the second line.

For species only detected by tracks or by other means, or that are seen or heard only in the count period but not on count day, the number of individuals is not given in Table 1. Species detected only by tracks are indicated by 't' in the table; those detected only by other means are indicated by the following letters: dead animals 'm', more clearly identifiable chewing or digging 'd', dens or lodges 'L' and by smell 's.' Species detected by any means during the count period, but not on count day are indicated by 'c' in the table. These additional species are tallied in lines 3, 4 and 5 at the bottom of the table. If a mammal is reported as member of a species group (i.e. mouse species, deer species), it is counted as a species only if no other species in this group has been definitely recorded. The columns at the end of the table, give totals for each species.



*Red Squirrel in March
2007 at Pike Lake, SK
Nick Saunders*

Table 1-1. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16
	Archerwill, 18 Dec 2006	Armit, 31 Dec 2006	Bangor, 18 Dec 2006	Big River, 28 Dec 2006	Biggar, 27 Dec 2006	Birch Hills, 20 Dec 2006	Brightwater, 5 Jan 2007	Broadview, 23 Dec 2006	Bromhead, 3 Jan 2007	Cabri, 23 Dec 2006	Candle Lake, 28 Dec 2006	Christopher Lake, 4 Jan 2007	Clark's Crossing, 16 Dec 2006	Codette Lake, 31 Dec 2006	Craven, 16 Dec 2006
Short-tailed Shrew															
Pygmy Shrew															
Shrew Species						t									
Nuttall's Cottontail	c														
Snowshoe Hare	c	t			t	2		t			t	t		t	t
White-tailed Jack Rabbit		t	6		t		3	t					1		1
Richardson's Ground Squirrel															
Eastern Grey Squirrel								3							
Fox Squirrel															
American Red Squirrel	1	12	1	2	1	7		3			7	10	1	2	
Northern Flying-Squirrel	c														
Northern Pocket Gopher															
American Beaver		L						L			L				
Deer Mouse															
Muskrat											t				
Gapper's Red-Backed Vole															
Meadow Vole															
Vole Species					t	t		t			t				
House Mouse				t											
Mouse Species	t					t		t			t				
American Porcupine	c			1		t		t			t		1		
Coyote	1			t	1	1	1	1	1	1	t		1	t	
Wolf												t			
Red Fox			1	t	1			1					1	1	
Swift Fox															
Raccoon	4	1						t							
American Marten															
Fisher											t				
Ermine						t		t			t				
Long-tailed Weasel						1		t			t				
Least Weasel	c					t								t	
Weasel Species					t										
American Mink						t		t			t				1
American Badger															
Striped Skunk	s														
River Otter											t				
Mountain Lion															
Lynx	c										t				
Woodland Caribou															
Mule Deer			2		82		2						8		16
White-tailed Deer	16	9	52	t	42	t		10	18		67	t	6	2	15
Deer Species															20
Moose	3	t			2			t	5		t			t	
Elk		3									t			t	
Pronghorn															
Totals seen/heard on count day	25	25	62	3	129	11	6	18	24	1	74	10	19	5	53
Total species seen/heard	5	4	5	2	6	4	3	5	3	1	2	1	7	3	4
Total species recorded by tracks	1	3	0	4	4	7	0	9	0	1	14	2	0	5	1
Total species otherwise recorded	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0
Species recorded count period	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total species count period and day	13	8	5	6	10	11	3	15	3	2	17	3	7	8	5

Table 1-2. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	17	18	19	20	21	22	23	24	25	27	28	29	30	31	32
	Creighton, 30 Dec 2006	Crooked Lake, 27 Dec 2006	Crooked River, 30 Dec 2006	Cypress Hills P.P., 29 Dec 2006	Dalmeny, 15 Dec. 2006	Dorintosh, 27 Dec 2006	Duck Lake, 29 Dec 2006	Dundurn, 31 Dec 2006	Eastend, 1 Jan 2007	Emma Lake, 4 Jan 2007	Endeavour, 26 Dec 2006	Estevan, 4 Jan 2007	Estuary North, 4 Jan 2007	Fenton, 18 Dec 2006	Fort Qu'Appelle, 16 Dec 2006
Short-tailed Shrew															
Pygmy Shrew															
Shrew Species							t				1				
Nuttall's Cottontail									c				3		
Snowshoe Hare	t	t	1		t	t	t	1						t	c
White-tailed Jack Rabbit								t					3		c
Richardson's Ground Squirrel															
Eastern Grey Squirrel															
Fox Squirrel												6			
American Red Squirrel	2	1	10	5		t	5			10	t			3	4
Northern Flying-Squirrel															
Northern Pocket Gopher															
American Beaver		t				L		L				L			c
Deer Mouse	t						t		t						
Muskrat		1													4
Gapper's Red-Backed Vole															
Meadow Vole											1				
Vole Species								t							t
House Mouse															c
Mouse Species			1			t		t							t
American Porcupine		d			t						t			1	
Coyote	t	2				t	1	1	5		1	3	3	t	c
Wolf	t						t								
Red Fox	t	t	c					1	t	c		t			2
Swift Fox															
Raccoon															c
American Marten	t														
Fisher	t														
Ermine	t						t								
Long-tailed Weasel															c
Least Weasel			c	t											t
Weasel Species		t			t	t					t				
American Mink															c
American Badger													2		
Striped Skunk		s							2	c					
River Otter															
Mountain Lion															
Lynx	t														
Woodland Caribou	t														
Mule Deer							3		134			14	17		c
White-tailed Deer	t	3	3	22	1	20		38	24	1	29	2	60	2	2
Deer Species								1							
Moose	t		3	t					3		1		4		
Elk				t							t				
Pronghorn															
Totals seen/heard on count day	2	7	18	27	1	20	9	42	168	11	33	25	92	6	12
Total species seen/heard	1	4	5	2	1	1	3	4	5	2	5	4	7	3	4
Total species recorded by tracks	12	4	0	3	3	5	6	2	2	0	4	1	0	4	0
Total species otherwise recorded	0	2	0	0	0	1	0	1	0	0	0	1	0	0	0
Species recorded count period	0	0	2	0	0	0	0	0	1	2	0	0	0	0	9
Total species count period and day	13	10	7	5	4	7	9	7	8	4	9	6	7	7	13

Table 1-3. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	33	34	35	37	40	41	42	43	44	45	46	47	48	50	51
	Gardiner Dam, 18 Dec 2006	Good Spirit Lake, 15 Dec 2006	Grasslands, N.P., 21 Dec 2006	Harris, 30 Dec 2006	Kelvington, 30 Dec 2006	Kenaston, 20 Dec 2006	Kenosee Lake, 3 Jan 2007	Ketchen, 26 Dec 2006	Kilwinning, 22 Dec 2006	Kindersley North, 26 Dec 2006	Kinloch, 14 Dec 2006	Kutawagan Lake, 27 Dec 2006	Kyle, 28 Dec 2006	Last Mountain Lake, 29 Dec 2006	Leader North, 30 Dec 2006
Short-tailed Shrew															
Pygmy Shrew															
Shrew Species															
Nuttall's Cottontail	4					t							1		1
Snowshoe Hare	1	t		t	t		t	t		t	t			1	
White-tailed Jack Rabbit	t	t		t	1	t						1	1		2
Richardson's Ground Squirrel			1												
Eastern Grey Squirrel															
Fox Squirrel															
American Red Squirrel		4			3		t	c	4		5				
Northern Flying-Squirrel															
Northern Pocket Gopher															
American Beaver						L	L	L			L				
Deer Mouse															
Muskrat		L				L					L				
Gapper's Red-Backed Vole															
Meadow Vole														1	
Vole Species	t			t								t			
House Mouse															
Mouse Species	t				1								t		6
American Porcupine	2	t				1	c				t			1	
Coyote	6	1	4	t	t	3	t				t	4	1	t	6
Wolf															
Red Fox	t					1								c	1
Swift Fox															
Raccoon						t									
American Marten															
Fisher															
Ermine												t			
Long-tailed Weasel															
Least Weasel															
Weasel Species	t	t		t	t						t				
American Mink															
American Badger						d				d					
Striped Skunk						d									
River Otter															
Mountain Lion															
Lynx															
Woodland Caribou															
Mule Deer	54		1	122		2				c		19	1	11	12
White-tailed Deer	22	13	100	131	6	c	14	9			26	19	8	14	15
Deer Species															
Moose		c				c	t	t		5	4				2
Elk							t	16			t				
Pronghorn													41		110
Totals seen/heard on count day	89	18	106	253	11	7	14	25	4	5	35	43	53	28	155
Total species seen/heard	6	3	4	2	4	4	1	2	1	1	3	4	6	5	9
Total species recorded by tracks	4	4	0	4	3	4	5	2	0	1	5	2	1	1	0
Total species otherwise recorded	0	1	0	0	0	4	1	1	0	1	2	0	0	0	0
Species recorded count period	0	1	0	0	0	2	1	1	0	1	0	0	0	1	0
Total species count period and day	10	9	4	6	7	14	8	6	1	4	10	6	7	7	9

Table 1-4. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
	Love-Torch River, 26 Dec 2006	Luseland, 26 Dec 2006	MacNutt, 27 Dec 2006	Mayview, 2 Jan 2007	Meadow Lake, 26 Dec 2006	Moose Jaw, 15 Dec 2006	Moose Mountain, 2 Jan 2007	Morse, 2 Jan 2007	Nipawin, 30 Dec 2006	Nisbet Forest NW, 23 Dec 2006	Nisbet Forest West, 26 Dec 2006	Pierce Lake, 31 Dec 2006	Pike Lake, 2 Jan 2007	Prince Albert, 17 Dec 2006	Prince Albert N.P., 21 Dec 2006
Short-tailed Shrew									c						
Pygmy Shrew									c						
Shrew Species								2		t					
Nuttall's Cottontail															
Snowshoe Hare	t								8		t		1	t	t
White-tailed Jack Rabbit	t	1						4	c					t	
Richardson's Ground Squirrel															
Eastern Grey Squirrel															
Fox Squirrel						1									
American Red Squirrel	3			3		4	2		3		2	9	15	8	30
Northern Flying-Squirrel				c					c						
Northern Pocket Gopher	d														
American Beaver								L		t		L			
Deer Mouse									c	t				t	
Muskrat									c			2		L	
Gapper's Red-Backed Vole															
Meadow Vole															
Vole Species													1		t
House Mouse															
Mouse Species										t				t	
American Porcupine		1			1				c				d	1	
Coyote	c	2	2			c	2	5	1	t		2	6	t	t
Wolf	c								c						t
Red Fox	1	1							2	t			1		t
Swift Fox															
Raccoon	4							t							
American Marten															t
Fisher															t
Ermine									c						t
Long-tailed Weasel									c				t	t	
Least Weasel									c				t	t	
Weasel Species	1										1				
American Mink													1		
American Badger	d														
Striped Skunk	c														
River Otter												t			t
Mountain Lion			t												
Lynx			t												t
Woodland Caribou															
Mule Deer		15						21					3		
White-tailed Deer	36		36			m	11	217	4	t	c	11	51	t	1
Deer Species														t	
Moose	2	c							c	2		1			t
Elk	t								1						t
Pronghorn		c													
Totals seen/heard on count day	47	20	38	3	1	5	15	249	21	0	3	26	78	9	31
Total species seen/heard	6	5	2	1	1	2	3	5	7	0	2	6	7	2	2
Total species recorded by tracks	3	0	2	0	0	0	0	1	0	6	1	1	2	7	13
Total species otherwise recorded	2	0	0	0	0	1	0	1	0	0	0	1	1	1	0
Species recorded count period	3	2	0	1	0	1	0	1	10	0	1	0	0	0	0
Total species count period and day	14	7	4	2	1	4	3	8	17	6	4	8	10	10	15

Table 1-5. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
	Qu'Appelle Dam, 17 Dec 2006	Raymore, 26 Dec 2006	Regina, 26 Dec 2006	Rouleau, 1 Jan 2007	Round Lake, 20 Dec 2006	Saltcoats, 29 Dec 2006	Sk. Landing P.P., 31 Dec 2006	Sk. River Forks, 19 Dec 2006	Saskatoon, 26 Dec 2006	Senate, 1 Jan 2007	Shamrock, 31 Dec 2006	Skull Creek, 27 Dec 2006	Snowden, 30 Dec 2006	Somme, 27 Dec 2006	Spalding, 19 Dec 2006
Short-tailed Shrew															
Pygmy Shrew															
Shrew Species				t				t							t
Nuttall's Cottontail	6						t			t		20			
Snowshoe Hare		t	t		t	2		t	2		t		t	4	1
White-tailed Jack Rabbit	1		23	1	t		t		5	t		15	1	c	
Richardson's Ground Squirrel									1						
Eastern Grey Squirrel			4												
Fox Squirrel		1	11												
American Red Squirrel	1				t	3		4	4			2	10	6	1
Northern Flying-Squirrel															
Northern Pocket Gopher															
American Beaver		L			1				1						
Deer Mouse		t	t						t						1
Muskrat									L						c
Gapper's Red-Backed Vole									1						
Meadow Vole			t												1
Vole Species		t			t			t		t					t
House Mouse												8			
Mouse Species							t	t		t			t		1
American Porcupine			t			t	1	t	1			2		1	
Coyote	11	2	6	2	1		4	2	1	2	3	5		2	t
Wolf															
Red Fox	3		3	5	t		2		5		1		m	1	t
Swift Fox										t					
Raccoon		2	1	t	t				m			t			
American Marten															
Fisher															
Ermine								t							c
Long-tailed Weasel			t			2		t	1	t		2		1	
Least Weasel		t											1		
Weasel Species			t		t										t
American Mink									t						
American Badger					d	d				1		d			
Striped Skunk		8					s		1				s		
River Otter															
Mountain Lion															
Lynx															
Woodland Caribou															
Mule Deer	39		4		5		24			10	24	120			
White-tailed Deer	10	2	6		2	t	2	t	42	23	4	400	36	92	2
Deer Species									t						
Moose	1			t				t						3	
Elk								t						1	
Pronghorn	53						40					30			
Totals seen/heard on count day	125	15	58	8	9	7	73	6	65	36	32	604	48	113	5
Total species seen/heard	9	5	8	3	4	3	6	2	12	4	4	10	4	11	4
Total species recorded by tracks	0	4	5	3	7	2	3	9	3	5	1	1	2	0	5
Total species otherwise recorded	0	1	0	0	1	1	1	0	2	0	0	1	2	0	0
Species recorded count period	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Total species count period and day	9	10	13	6	12	6	10	11	16	9	5	12	8	14	8

Table 1-6. 34th Saskatchewan Christmas Mammal Count-2006.

Map number	82	83	84	85	86	88	89	90	91	92						
	Spinney Hill, 14 Dec 2006	Squaw Rapids, 1 Jan 2007	Stenen, 1 Jan 2007	Swift Current, 30 Dec 2006	Togo, 4 Jan 2007	Turtleford, 29 Dec 2006	Weyburn, 16 Dec 2006	White Bear, 26 Dec 2006	Whitewood, 30 Dec 2006	Yorkton, 21 Dec 2006	# individuals seen/heard count day	# Counts seen/heard	# Counts recorded as tracks	# Counts recorded as other	# Counts, count period	# Counts, count period & count day
Short-tailed Shrew											0	0	0	0	1	1
Pygmy Shrew											0	0	0	0	1	1
Shrew Species			t			t					3	2	8	0	0	10
Nuttall's Cottontail				13							48	7	3	0	2	12
Snowshoe Hare		t			1	t			t	t	25	12	34	0	2	48
White-tailed Jack Rabbit				9				2	t	t	81	19	15	0	3	37
Richardson's Ground Squirrel				1							3	3	0	0	0	3
Eastern Grey Squirrel				11							18	3	0	0	0	3
Fox Squirrel							12		t		31	5	1	0	0	6
American Red Squirrel	1	9	2		6				1	1	233	47	4	0	1	52
Northern Flying-Squirrel					1						1	1	0	0	3	4
Northern Pocket Gopher											0	0	0	1	0	1
American Beaver						L			L		2	2	2	15	1	20
Deer Mouse						1					2	2	8	0	1	11
Muskrat						L			L		7	3	1	7	2	13
Gapper's Red-Backed Vole											1	1	0	0	0	1
Meadow Vole											3	3	1	0	0	4
Vole Species		t				t					1	1	17	0	0	18
House Mouse											8	1	1	0	1	3
Mouse Species		t		t							9	4	17	0	0	21
American Porcupine					1	t					16	14	11	2	3	30
Coyote		t		1	2	3		5	t	t	121	45	18	0	3	66
Wolf		t		1							1	1	5	0	2	8
Red Fox			1	t	2		1		t		39	23	12	1	3	39
Swift Fox											0	0	1	0	0	1
Raccoon											12	5	6	1	1	13
American Marten											0	0	2	0	0	2
Fisher			1								1	1	3	0	0	4
Ermine		t								1	1	9	0	2	12	
Long-tailed Weasel				1					1		9	7	7	0	2	16
Least Weasel		t		t							1	1	9	0	3	13
Weasel Species			t			t			t	t	2	2	17	0	0	19
American Mink				t					t		2	2	6	0	1	9
American Badger				L					c		3	2	0	7	1	10
Striped Skunk					1						12	4	0	5	2	11
River Otter		t									0	0	4	0	0	4
Mountain Lion											0	0	1	0	0	1
Lynx											0	0	4	0	1	5
Woodland Caribou											0	0	1	0	0	1
Mule Deer	2			27		3	29	28			854	32	0	0	2	34
White-tailed Deer	5	3		174	4	1		6	3	1	2006	63	8	1	2	74
Deer Species			7								28	3	3	0	0	6
Moose		t			1				c		42	16	12	0	5	33
Elk		t			6	3			t		30	6	11	0	0	17
Pronghorn				150							424	6	0	0	1	7
Totals seen/heard on count day	8	12	11	387	26	11	42	41	5	3	4080					
Total species seen/heard	3	2	4	9	11	5	3	4	3	3		32				
Total species recorded by tracks	0	10	2	4	0	5	0	0	8	4		30				
Total species otherwise recorded	0	0	0	1	0	2	0	0	2	0				9		
Species recorded count period	0	0	0	0	0	0	0	0	2	0					27	
Total species count period and day	3	12	6	14	11	12	3	4	14	7						40

Table 2-1. Summary of high counts for mammals seen or heard on Saskatchewan Christmas Mammal Counts. Locations of highest numbers set in 2006 are in bold and italics. See text for abbreviations.

SPECIES	NO.	COUNT LOCATION
Short-tailed Shrew	1	Squaw Rapids 22 Dec. 1991; Ft. Qu'Appelle 15 Dec. 2001, and 18 Dec. 2004, also Count Period 1986, 1999 and 2000
American Water Shrew	c	Prince Albert N.P., 1992
Masked Shrew	2	Raymore, 25 Dec. 1994
Pygmy Shrew	1	Prince Albert, 1 Jan. 1987
Little Brown Bat	m	Ft. Qu'Appelle, 27 Dec. 1989
Big Brown Bat	m	Ft. Qu'Appelle, count period 1990
Eastern Cottontail	2	Estevan, 22 Dec. 1990, 24 Dec. 1992, and 26 Dec. 2000
Nuttall's Cottontail	27	Skull Creek, 26 Dec. 1995
Snowshoe Hare	35	Saskatoon, 26 Dec. 1978
White-tailed Jack Rabbit	210	Regina, 26 Dec. 1981
Woodchuck	1	Gardiner Dam, 19 Dec. 1988
Franklin's Ground Squirrel	1	Asquith, 23 Dec. 1975
Richardson's Ground Squirrel	14	Grasslands N.P., 28 Dec. 1991
13-lined Ground Squirrel	1	Craven, 14 Dec. 2003
Black-tailed Prairie Dog	463	Grasslands N.P., 28 Dec. 1991
Least Chipmunk	1	Archerwill, 4 Jan. 2004; Ft. Qu'Appelle, 18 Dec. 2004
Eastern Grey Squirrel	37	Swift Current, 31 Dec. 2005
Fox Squirrel	50	Moose Jaw, 26 Dec. 1997
American Red Squirrel	112	Prince Albert N.P. 18 Dec. 1988
Northern Flying-Squirrel	4	Togo, 1 Jan. 2002, and 2 Jan. 2003
Northern Pocket Gopher	1	Ft. Walsh, 15 Dec. 1990
American Beaver	7	Fenton, 17 Dec. 2004
Deer Mouse	16	Bangor, 17 Dec. 1999
Muskrat	9	Round Lake, 27 Dec. 1994, and 20 Dec. 1997
Gapper's Red-Backed Vole	7	Raymore, 24 Dec. 1989
Meadow Vole	71	Somme, 21 Dec. 2005

Table 2-2. Summary of high counts for mammals seen or heard on Saskatchewan Christmas Mammal Counts. Locations of highest numbers set in 2006 are in bold and italics. See text for abbreviations.

SPECIES	NO.	COUNT LOCATION
Sagebrush Vole	m	Not yet seen or heard; Glentworth, 19 Dec. 1991
Norway Rat	15	Warman, 26 Dec. 1986
House Mouse	8	<i>Skull Creek, 28 Dec. 2006</i>
American Porcupine	9	Skull Creek, 26 Dec. 1997
Coyote	26	Qu'Appelle Dam, 5 Jan. 1997
Wolf	14	Prince Albert N.P. 16 Dec. 1989
Red Fox	17	Regina, 26 Dec. 1991
Swift Fox	1	Grasslands N.P., 28 Dec. 1995; Govenlock, 21 Dec. 2003, and 18 Dec. 2005
Black Bear	c	Kamsack, 1996, 1998
Raccoon	5	Ft. Qu'Appelle, 21 Dec. 1996
American Marten	1	Squaw Rapids, 18 Dec. 1987; Love, 27 Dec. 2000
Fisher	2	Birch Hills, 23 Dec. 1988; Turtle Lake, 26 Dec. 2000
Ermine	2	Skull Creek, 28 Dec. 2004
Long-tailed Weasel	4	Moose Jaw, 26 Dec. 1982; Skull Creek, 26 Dec. 1995
Least Weasel	4	Skull Creek, 26 Dec. 1999
American Mink	4	Ft. Qu'Appelle, 19 Dec. 1999
American Badger	10	Assiniboia, 2 Jan. 1995
Striped Skunk	8	<i>Raymore, 26 Dec. 2006</i>
River Otter	6	Prince Albert N.P. 18 Dec. 1994
Mountain Lion	t	Not yet seen or heard: Gardiner Dam, 19 Dec., 1994; Herschel, 29 Dec. 1998; Saskatoon, 26 Dec. 2001; MacNutt, 27 Dec. 2006
Bobcat	1	Weyburn, 15 Dec. 1990; Cypress Hills P.P., 30 Dec. 1997
Lynx	1	South to Somme and MacNutt
Woodland Caribou	1	Sandy Bay, 23 Dec. 1988
Mule Deer	372	Grasslands N.P., 30 Dec. 1990
White-tailed Deer	400	<i>Skull Creek, 27 Dec. 2006</i>
Moose	23	Loon Lake, 27 Dec. 1986
Elk	168	Cypress Hills P.P., 30 Dec. 1996
Pronghorn	482	Govenlock, 19 Dec. 1999

NOTES AND LETTERS

WILLOW PTARMIGAN IN THE PRINCE ALBERT AREA

On the afternoon of February 15, 2007, as I was returning along the driveway to our home about 10 km northeast of Prince Albert (53° 17.2' N, 105° 39.5' W), I noticed what appeared to be grouse tracks leading from the road into a row of Laurel Leaf Willows (*Salix pentandra*) that border the driveway. I paused to see if I could spot what I suspected to be a Ruffed Grouse or, possibly a Sharp-tailed Grouse. The tracks led to a white lump in the snow and I soon realized that I was looking at a ptarmigan. I grabbed the camera and attempted to approach close enough for a clear shot, but the bird kept moving to the far side of the willow clump while I circled the bush in my street shoes through waist deep snow banks. I was grateful, however, that he did not fly and my patience was eventually rewarded with several reasonably clear images. I quickly drove home and changed into more suitable footwear. When I returned, the ptarmigan had walked 30 m to a clump of native willows and appeared to be feeding on the buds. This time I was able to acquire several top quality images.

This bird was pure white with the exception of the dark beak and eyes and black shafts of the primaries. When he became agitated, the crescent-shaped red comb above his eye became evident and the feathers on his head rose into a distinct crest (see photo on the inside back cover). At no time did the bird betray any black in the tail. I felt it necessary to flush the bird in order to observe tail coloration and thus be more certain of its identification. The ptarmigan was

reluctant to fly and its 'furry' feet could propel it much more quickly over the waist-deep snow than my feet could. Eventually, though, I did manage to flush him for a 20 m flight and the black feathers in his tail were almost startlingly evident. This was the only time the bird was sighted; later attempts to locate it were unsuccessful.

Identification of this bird as a Willow Ptarmigan is based on several factors. The black on the tail separates it from the White-tailed Ptarmigan which has a completely white tail. The male Rock Ptarmigan has a black mark between the eye and the bill (lores), but the females of both species are difficult to distinguish. The willow habitat in which this bird was found supports the identification of this bird as a Willow Ptarmigan, as does the relatively heavy bill. Peterson's 1990 *Field Guide to Western Birds* lists willow scrub as habitat of the Willow Ptarmigan, while the Rock Ptarmigan is found on arctic tundra and above timberline in mountains.²

The Willow Ptarmigan normally migrates southward into northern Saskatchewan during the winter months to about latitude 57°.³ Its occasional winter incursions to the Parkland and farmlands as far south as the Qu'Appelle Valley, Saskatchewan, prior to about 1950, is well documented.³ Historic records of Willow Ptarmigan from Prince Albert date from the winters of 1897, 1898, 1914 and 1927-28.¹ Ptarmigan sightings in central Saskatchewan have been rare during recent decades.

Certainly, its presence here in recent decades is unusual.

Acknowledgements

I thank C. S. Houston for checking this article and providing helpful suggestions in its preparation.

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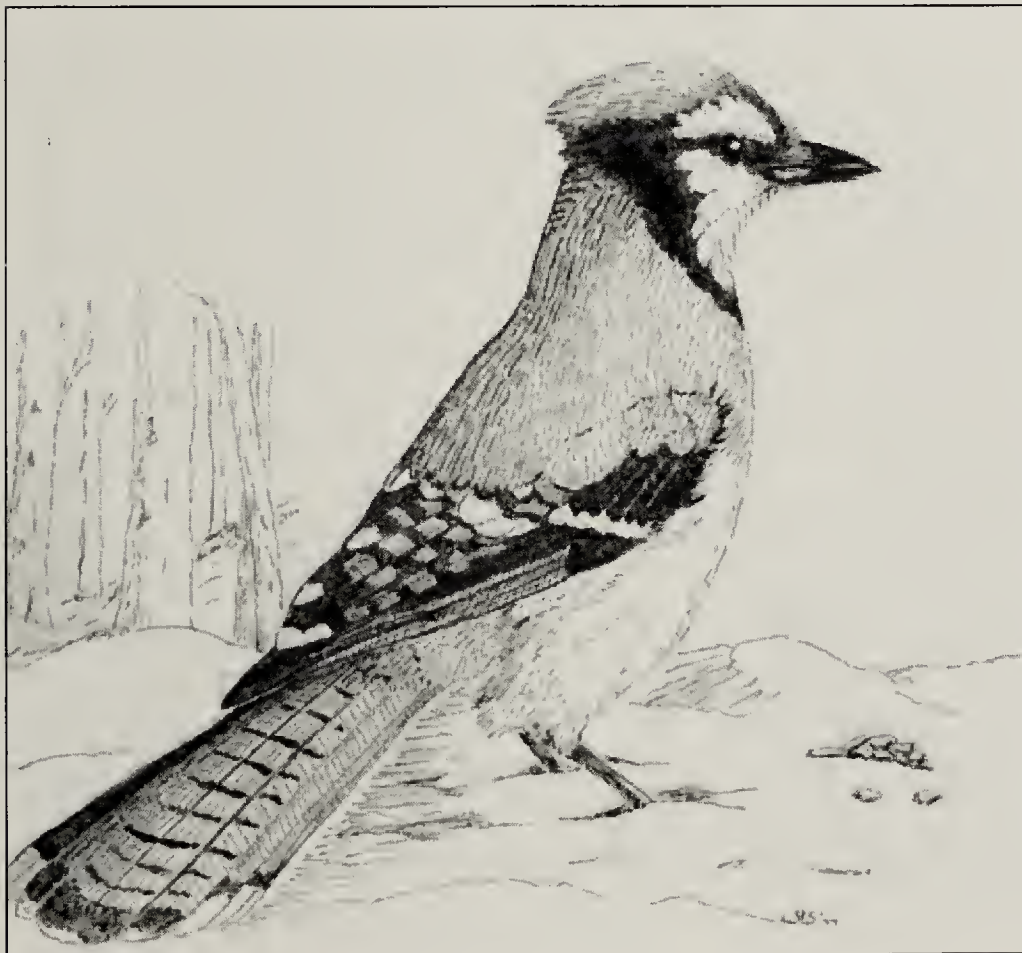
RAPID RECOVERY

In early December, Don and I noticed that one of the eight Blue Jays regularly visiting our feeders had no tail. We noted that, while the stately elegance of the Blue Jay is certainly diminished without that beautifully marked blue tail, the flight of "Mr. No Tail" did not seem to be impaired by his loss, that he was feeding well, and that he was not harassed for his difference by the other Blue Jays.

Knowing nothing of the biology of feathers and their growth, we wondered how long it would be before a new tail

would grow. Would he have to wait until next moult? Till spring? We waited and watched with great interest.

We did not wait long! Within ten days, we were sure that we could see new growth beneath his folded wings as he fed. Another week passed and we re-named him "Mr. Short Tail." In three weeks the new tail was fully grown! Our bird was still identifiable, however, for he carried his fine new feathers fanned into a V-shape, beautifully exposing the white border framing his brilliant blue tail.



Blue Jay

W. Ray Salt, 1978

By mid-January, we could no longer identify our bird. All of our eight Blue Jays had beautiful long, blue tails, straight when they perched, fanned when they flew. And we have answers to some questions we had previously never even thought to ask!

- *Ardythe McMaster*, Box 40, Rossendale, MB R0H 1C0

SNOWY OWL AND PRAIRIE FALCON WINTER ENCOUNTERS

On 21 January 2007, I observed a Snowy Owl sitting on a utility pole near a wooden granary that houses a small flock of pigeons, 3 kilometres East of Tyner, SK. Based on the uninterrupted barring on the back of the head and lightly barred undertail coverts, I guessed that the owl was a juvenile. In the field north of the owl, I started to set up a mist net to try to catch the owl for banding. However, as I completed the set-up, I saw the owl leave the pole and fly out into the field about 200 m away, landing in a row of kochia (*Kochia scoparia*) partly covered with snow.

Within a few seconds a Prairie Falcon appeared and dove at the owl. The falcon stooped on the owl extending its talons as it passed over the owl. The owl crouched and then, timing the falcon's approach, kicked both feet upwards to present its talons to the falcon. The owl could only get its talons level with its eyes. The falcon passed over the owl missing it by several centimetres. The owl dropped onto its wings and tail, and then struggled to its feet, pushing on the ground with its wings to right itself. As the falcon passed by, I observed that it was missing at least one inner primary flight feather on the right wing. The falcon swooped up, turned 180 degrees, and dove at the owl again. The owl turned to face the falcon and again tried to kick its feet over its head to meet the falcon as it passed from the opposite direction. As I watched, the falcon made 12 passes at the owl before landing on a utility pole.

Perhaps because of its preoccupation with the owl, I was able to get close to the falcon. I could see

by the plumage and the yellow cere and feet, that it was an adult. It also was banded. I had banded an adult female Prairie Falcon at this same spot on 23 December, 2006 and had watched a Prairie Falcon catch a pigeon here on January 13, which suggests the possibility that I was watching the same territorial bird.

After approximately five minutes, the falcon resumed diving at the owl, which responded to each dive with the same double leg kick. The falcon made eight more passes before returning to a utility pole.

The owl appeared to occasionally look at the caged pigeon placed on the ground behind the mist net, so I moved my vehicle closer to the Prairie Falcon to try to move the falcon away. The falcon let me get within about 30 metres, the closest I have ever been able to approach a Prairie Falcon, but then it flew to the next pole farther away and again watched the owl. I moved closer until the falcon flushed to one pole further away. We did this several times, but then when the falcon was about two hundred metres west of the owl, it flew in a semicircle back to the owl and resumed diving at it. When I packed up my net and collected the pigeon, the falcon was still making passes at the owl.

On 3 February, 2007, I caught and banded an adult male Snowy Owl near the same granary. When I let the owl go, it flew back to the pole it had been sitting on before I had caught it. After I packed up my gear and passed by the owl, I noticed that a Prairie Falcon was sitting on the adjacent pole, so I stopped at the next approach to watch.

Both birds sat quietly for a few minutes, but then the falcon flew from its pole and at the owl. This owl behaved differently from the juvenile owl. As the falcon approached the owl, the owl opened its wings slightly, but otherwise didn't move. The falcon pulled up before hitting the owl and continued on, landing on the pole on the opposite side of the owl, and then sat quietly. When the falcon flew I could see a gap in the flight feathers of the right wing, suggesting that this was the same individual as in the first incident.

After about five minutes the falcon made another pass at the owl. Again, the owl hunched its shoulders and opened its wings slightly, but otherwise didn't move. When I left ten minutes later the two birds were still sitting on adjacent poles. Several hours later, after sunset, I returned by the same spot and could see that the owl was still there but the falcon was gone.

- Dan Zazelenchuk, Box 39, Kyle, SK S0L 1T0. E-mail:danzaz@sasktel.net



Snowy Owl, March 6, 2007, 7 miles northwest of Kyle

Dan Zazelenchuk

TURTLES IN WASCANA LAKE: SUCCESSFUL CONSERVATION DURING THE “BIG DIG”

When I sent in the picture of a Painted Turtle on Wascana Lake in Regina, SK (*Blue Jay* December 2006), I should have provided some detail of how their habitat, especially their overwintering site, was preserved when the lake was deepened during the winter of 2003/2004. In that large operation, dubbed the “Big Dig,” both the west basin and the east basin (locally known as ‘The Marsh’) were drained. The west basin was deepened and a temporary road was built through the east basin to remove the excavated material from the site.

In previous years, many Painted Turtles overwintered in the mud under the water of a dugout on Goose Island. This dugout is 5-6 m deep. According to the original plans, the dugout was slated to be filled in and Goose Island to be enlarged to accommodate some of the material excavated from the west basin. Upon the urging of Lorne Scott, a former naturalist with the Wascana Authority, and others, the dugout was not filled in, its water was not drained and the overwintering turtles could survive the “Big Dig” and subsequent winters. Instead, Pelican Island was created with some of the excavated material. The haul road, originally

planned to run the length of The Marsh, was shortened to preserve the habitat south of the Wascana Mountain where many turtles were seen during the previous summers.

These conservation efforts were successful. Gary Seib reported that at the Wascana Festival in the summer of 2006, 6-8 turtles basking in the sun could be pointed out to groups of students. Bob Ewart, Park Naturalist with the Wascana Authority, told me that in the summer of 2006, 23 turtles were seen on one day south of Wascana Mountain. The turtles even recolonized the west basin, which is where I saw eight painted turtles in 2006 as reported in the December issue. It should be mentioned also that a shallow strip, at least 10 m wide, was created around the shores of the west basin to stabilize the shoreline and to create habitat for plants and aquatic wildlife such as turtles.

I thank Bob Ewart, Lorne Scott and Gary Seib for supplying the above information.

- *Diether Peschken*, 2900 Rae Street,
Regina, SK S4S 1R5



“Among the different members of the fungus tribe, certain kinds of spores are shot out from catapults, others are propelled through the air by a jet propulsion mechanism, others are carried about by insects which act as the unwitting agents of dispersal, and still others are splashed by rain out of special minute cups that harness the force of falling raindrops.”

Harold J. Brodie, *Fungi, Delight of Curiosity*, p. 13.

SINGING ROCKS

Grasslands National Park, Spring 2006

Limp, dusty short grasses,
 Curving gently to earth, weak still from winter sleep.
Spirit rocks, coated thickly in yellow, orange and white
 bountiful growth, bright, beautiful and sad
Silent for more than a hundred years,
 longing for the touch of a woolly buffalo.

A brief caress communicates the news -
 the buffalo are coming back.
The spirit, released by the message,
 Wails as it soars and scatters in the still air.
A brief reminder
 of the patience of rocks
waiting decades to feel the thunder of hooves
crossing short grass and...
the rub of warm thick fur
 that covers life
 that rubs away the lichens
 that revives the spirit.

- Gloria Goulet

THE RELEASE

(May 17, 2004, Old Man on His Back, Saskatchewan)
for Sharon & Peter Butala

We have no measure for their vanishing.

I listen in four directions though I can't remember dreaming
sky, and earth. Say it humbly, *the bison have returned*.
We stand behind straw-bale blinds our eyes follow lines
we have no story for. The bison crest the ridge,
uncertain at the gate.

Fifty yearlings, ragged in their winter coats, they balk,
heads swinging. The riders close behind, their horses step
muscles straining to the south. Just north of here men once shot
bison from rail cars. So many they barely had to aim, brandy
and cigar at hand, and the gentlemen felled
the bison at the speed of steel.

A scruffy heifer passes through, then breaks, the herd follows,
running the fence-line before wheeling around to pass before us.
Their fierce hooves praise the earth; this thunder turns into north-wind
and from their throats comes a kind of weeping, the thrust of a long singing
once heard but not understood. Now the bison walk above and below
the stars and the lichen and the grass and the rain and the stones

and all is returned to them and returned again.

- Paul Wilson

FINDING BIRDS IN SOUTHERN MANITOBA

BRAD CAREY et al. 2006. Manitoba Naturalists Society and Brandon Naturalists Society. 210 pages. Soft Cover. 14 cm by 21.5 cm. 50 colour photographs, 33 maps. ISBN 0-9697280-3-4 (MNS); 0-9782374-0-4 (BNS). Cost: \$23.55 (includes handling and postage within Canada) from Manitoba Naturalists Society, 401-63 Albert St., Winnipeg, MB R3B 1G4 and Brandon Naturalists Society, 605 41st St., Brandon, MB R7B 4E1.

Birders from all over North America and from abroad often choose Manitoba as the place where they are likely to encounter the broadest range of North American birds in a short period of time. Confirmation of the wisdom of their choice is found in the "Big Day" counts for the most species seen in a single midnight-to-midnight period. Southern Manitoba holds the North American records for June and July, and Canadian records for all months from May through September! The 200-species record for Manitoba (and Canada) was first broken in May 1987 by a team of four birders who saw 205 species in 24 hours. On 2 June 2006, 212 species were recorded in a one-day jaunt from southeast to southwest, a North American record.

A group of well-known Manitoba birders has just published one of the best bird-finding guides available anywhere. Their names deserve mention in a review: Brad Carey, Ward Christianson, Andy Courcelles, Calvin W. Cuthbert, Larry de March, Ken D. De Smet, George E. Holland, Jean I. Horton, Rudolf F. Koes, Robert J. Parsons, Amelia Reid, Peter Taylor, Liis Veelma, Marlene Waldron, Adam Walley, Gene Walz, Margaret Yorke. Although the title rightfully suggests a focus on "southern Manitoba," key sites

in central Manitoba as far north as The Pas are also included. The book consolidates and updates two previous works: *Birder's Guide to Southwestern Manitoba* (1990) and *Birder's Guide to Southeastern Manitoba* (1980, 1988).

Sturdy, ring-bound, with field guide dimensions (unless you are thinking of Sibley), this 210-page book is readily portable. As a help to planning your Manitoba visit and the bird species you'd like to see, the guide includes both species and location indices and a list of birding organizations and local contacts. The well-developed Table of Contents (pp. iii-vii) provides a useful summary of the content which follows. A short introduction and a summary of recent changes in bird numbers and distribution are followed by a few pages of practical advice for the traveler. They honestly admit that mosquitoes, wood ticks and deer ticks can be a problem in much of the area and they advise sensible precautions, particularly in years when West Nile virus or Lyme disease have been reported.

The guide is subdivided into three main geographic areas: Southeastern Manitoba (including Winnipeg, the south end of Lakes Winnipeg and Manitoba, Whiteshell Park, and the extensive area south and east of

Winnipeg to the American and Ontario borders); Southwestern Manitoba (including Brandon, Oak Lake, Spruce Woods Park, Turtle Mountain Park, the extreme southwest prairie region, and Riding Mountain National Park); and Central Manitoba (including Hecla-Grindstone Park, Dauphin, Duck Mountain Park, the Porcupine Forest, and the highways to the The Pas and Thompson).

Most of the 80 or more site descriptions include a brief introduction to the area, specific directions on how to reach it, a map, and a listing of key bird species likely to be seen, with an emphasis on the specialties. Numerous hiking trails are described, and in some instances, availability of campgrounds and other accommodation is indicated. Mention is always made of roads which become slippery or impassable when wet.

The guide concludes with chapters on Man-made Habitats; Hawk Watch Sites; Specialties of the Region; a carefully developed Species List (30 pages) suggesting habitats in which a bird is most likely to be found, accompanied by bar graphs indicating normal seasonal abundance; and three further lists: Occasional Species (having occurred more than 5 times in region since 1980), Accidental Species (1 to 5 times in region since 1980), and Hypothetical Species (reported since 1980 but sighting not confirmed by Manitoba Ornithological Records Committee). A small list of pertinent Manitoba references is appended, as well as the Birding Code of Ethics,

developed by the American Birding Association.

This guide convinces me that Manitoba should be high on any birder's list of places to visit. The book is attractive, well written, compact, inexpensive and eminently practical. Perhaps surprising in a guide of this sort are the numerous colored habitat photos –a welcome addition. What is needed, however, is a large, fully detailed map of Manitoba to supplement the small maps in the text. Maps and accommodation guides can be ordered from Travel Manitoba at their web site, by mail from 155 Carlton St., Winnipeg, R3C 3H8 or by phone at 1-800-665-0040.

I can hardly wait to put this guide to practical use. Residents of Saskatchewan, particularly those within easy driving distance of the Manitoba border, will want to explore nearby sites like the Porcupine Provincial Forest, Duck Mountain, Riding Mountain National Park, Oak Lake, Spruce Woods Provincial Park, and Turtle Mountain Provincial Park. Wouldn't it be fun, though, to follow the Assiniboine after it leaves Saskatchewan to meander all the way to Winnipeg? And who among us would not be thrilled to hear or see American Woodcock, Eastern Screech Owl, Whip-poor-will, Chimney Swift, Red-headed Woodpecker, Yellow-throated Vireo, Golden-winged Warbler, Northern Parula, or Scarlet Tanager — all of them Manitoba specialties?

Reviewed by J. Frank Roy, 912-606 Victoria Ave., Saskatoon, SK S7N 0Z1. E-mail: jfroy@shaw.ca



“A breeding burrowing owl, threatened in its underground nest, gives a harsh, buzzing sound that closely matches that of an angry prairie rattlesnake.”

Scott Weidensaul, *The Birder's Miscellany*, p.41.

MYSTERY PHOTO

MARCH 2007 MYSTERY PHOTO

The bird on this slough near Last Mountain Regional Park in SK on 1 September 2005 is a *what?* (See photo on the bottom of the inside back cover.)

ANSWER TO THE DECEMBER 2006 MYSTERY PHOTO



Figure 1. Touch-me-not capsules and seeds

Patrick Leighton

The mystery object, shown in the middle of Figure 1, is the seed capsule of a plant called Touch-me-not, *Impatiens capensis*. The capsule disperses seeds by popping open explosively when touched. The mystery object is a popped capsule. A capsule ready to pop can be seen on the right of Figure 1, and there are two seeds lying on the log to the left. Figure 2 shows Touch-me-not flowers and pods hanging from a plant growing along a lakeshore, a typical habitat for both native species of Touch-me-not that grow in the prairie provinces.

If you accidentally trigger a pod explosion, it can be quite startling. The pod makes a slight noise, throws back the 5 valves that make up the capsule wall at lightning speed, and sends the seeds flying. One feels movement and is apt to jump back. These photographs were taken at Besnard Lake, SK on 28 August 2006. If you are near a boreal forest lake or stream in late summer and encounter some pods, touch them gently to see if they are ripe enough to explode.



Figure 2. Touch-me-not flowers and seed pods

Anna Leighton

Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history and conservation for Saskatchewan and adjacent regions. It is published quarterly by **Nature Saskatchewan, 206-1860 Lorne Street, Regina, Saskatchewan S4P 2L7.**

CN ISSN 0006-5099

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Printed by Impact Printers, Regina, SK on 50% recycled paper.

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